

BALTIMORE RECORD



MANUFACTURERS' RECORD

A Weekly Southern Industrial and Hardware Newspaper.

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WEEKLY.

BALTIMORE, JULY 9, 1887.

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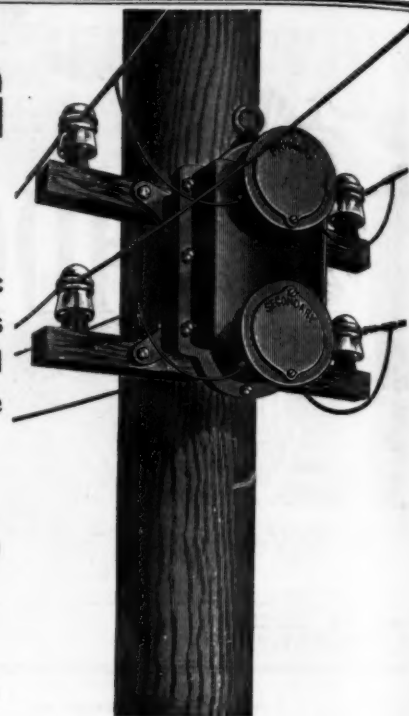


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INCANDESCENT Electric
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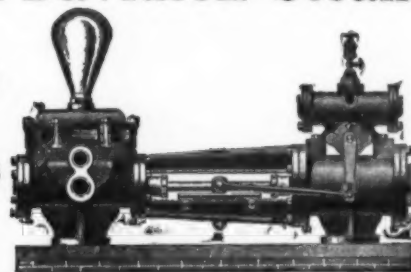
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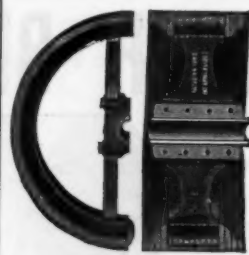
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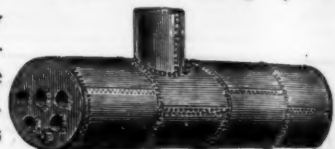
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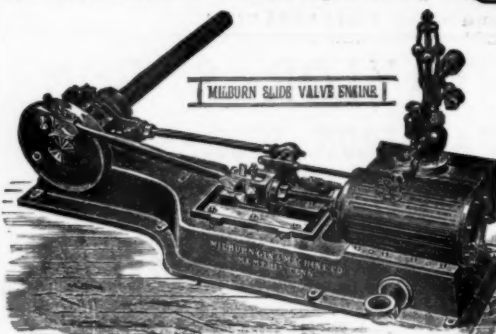
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It is impossible to reliably Preserve Fruits in any Jar that will not keep them covered by the Syrup. This is the ONLY JAR that does it. (See illustrations.) (Protected by Four United States Patents.)



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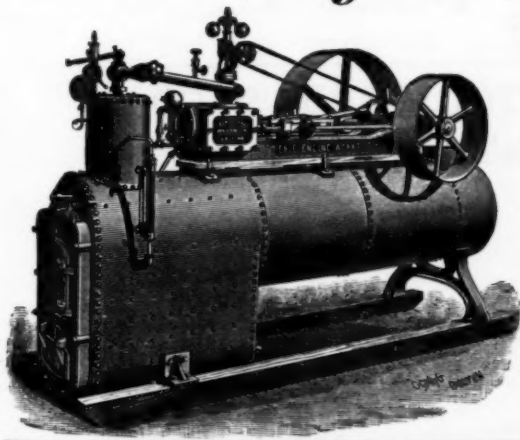
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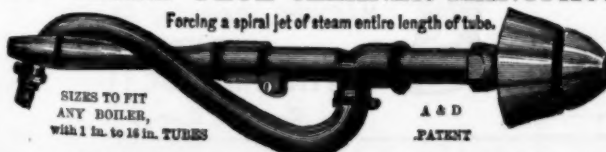
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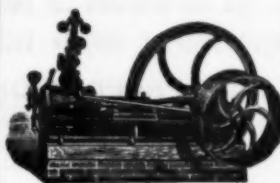
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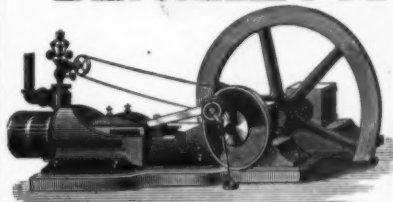
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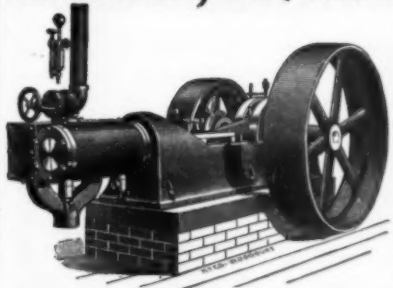
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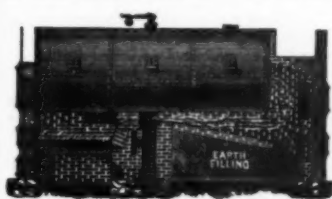
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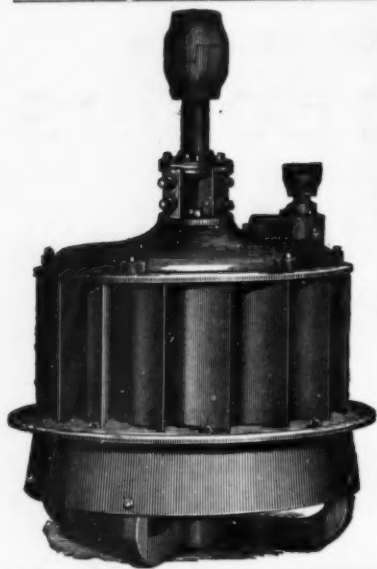
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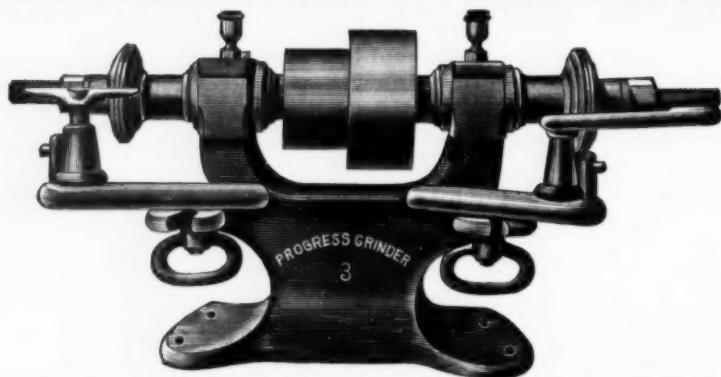
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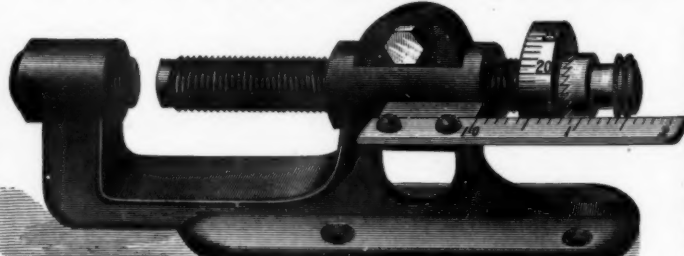
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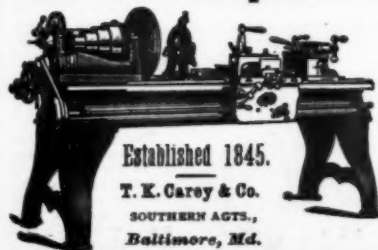
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The terms shall be as reasonable as the accommodations will allow.

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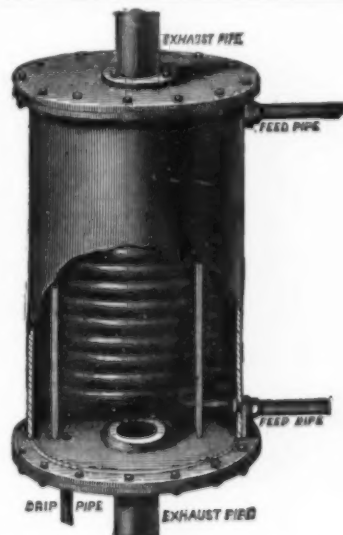
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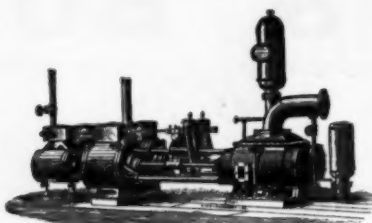
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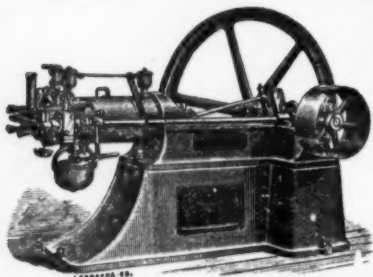
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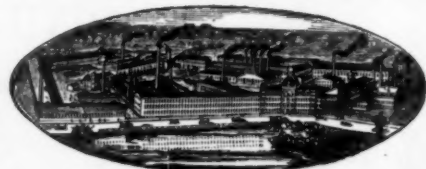
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BALTIMORE, JULY 9, 1887.

Cost of Making Iron in Alabama.

The lowest cost at which pig iron can be made in the South has been a matter of much discussion. During the depression of a year or two ago when iron was so extremely low many Northern iron makers insisted that Southern furnaces were losing money, but somehow their owners kept on turning out all the iron that they could produce, and even went into enlarging their plants and building new furnaces with a vim that surprised their Northern competitors. The only answer that the Southern iron men would make to the predictions of their early failure, was to build more furnaces. They kept on building and have not failed yet. It is still a disputed question as to how low iron can be made in the South. The Gadsden, (Ala.) people claim that it can be produced there for \$8 to \$8.50 a ton, and Mr. R. P. Rothwell, C. E. and M. E., editor of the N. Y. Engineering and Mining Journal, after a close personal investigation, stated that there were places in Alabama where it could be made for \$8 a ton. And now comes a statement which, while it does not show at just what figures iron can be made for, yet it does show that there is a large profit even in the periods of severest industrial depression. Mr. Tyler, the president of the Woodstock Iron Co., of Anniston, recently wrote a letter to a New York friend, which, we suppose, was not intended for publication, but which has found its way into the papers of that city. In this letter he says;

"We have a demand for all the iron we can make, and have sold several thousand tons ahead. Our shipments have taken every car the railroads can supply us, and we have not had as many cars furnished us as we needed. At the present time, notwithstanding car iron is very low, our two furnaces are earning over \$120,000 per annum. Two new coke furnaces are going ahead rapidly. On an annual production of 75,000 tons, which is 25,000 tons less than their estimated capacity, they will earn net \$260,000, putting earnings on a basis of the lowest price for iron in the Cincinnati market touched since 1860."

This is probably the most important statement yet made as to the cost of producing iron, coming, as it does, from such high authority and from a company that has been so signally successful. These are certainly remark-

able figures, and they demonstrate what the South can do in the way of making iron. The two coke furnaces that this company is now building will have a capacity of over 100,000 tons a year, but allowing for stoppages and other drawbacks, and putting their annual production at 75,000 tons, they will, according to Mr. Tyler, earn \$260,000 a year or \$3.50 a ton, not on the basis of good prices, but on the basis of the lowest prices touched by iron in the Cincinnati market since 1860. The two furnaces that are now earning \$120,000 net a year make a high grade charcoal iron. Their total aggregate annual capacity is given as 20,000 tons, but few furnaces ever reach in actual operation the full estimated capacity.

In view of these facts our Northern friends who have been standing off, waiting (and possibly some few of them hoping) for that big crash that they have been predicting for several years, but which fails to materialize despite their confident assertions, might as well give up. Alabama has avowed her intention of fulfilling the prophecy made some years ago by Hon. Abram S. Hewitt, of New York, of becoming "the greatest center of coke-made iron on the habitable globe," and she is pushing along in that direction at a pretty lively gait.

Sugar Making in Florida.

The advantages for sugar making that have long been claimed for Florida have been proven to the satisfaction of some leading Florida and Philadelphia capitalists, and they have determined to erect near Kissimmee, the coming center of South Florida, a sugar mill and refinery capable of producing 65,000 lbs. of sugar a day. The machinery has been purchased and all arrangements made for building this great mill, destined to have a most important effect upon the sugar interests of Florida and probably the whole country. It is claimed by those who ought to be good judges that Florida is the best country in the world, taking all things into consideration, for raising sugar cane and making sugar. There are millions of acres of land of almost unequalled fertility in the southern part of that State, admirably adapted to the growth of sugar cane, and the friends of that State claim many advantages over Louisiana for cane raising. It will be remembered that the Hon. Wm. D. Kelley, of Pennsylvania, who recently made a thorough investigation of this matter, is enthusiastic over the possibilities of Florida as a sugar producer. It may in time come to pass that Florida will supply the bulk of the sugar consumed in this country, instead of Cuba as at present. Among those interested in this new mill to be built at Kissimmee are Messrs. Hamilton Disston, of Philadelphia, and R. E. Rose, of Kissimmee. Elsewhere in this issue we publish a letter from Mr. Rose giving the particulars of this important undertaking. It marks the beginning of greater prosperity for South Florida than yet enjoyed.

The Emancipation of the Southern Whites and Its Effect on Both Races.

Under the above heading, Hon. John W. Johnston, of Richmond, for many years a member of the United States Senate from Virginia, commences in this issue of the MANUFACTURERS' RECORD an exceedingly interesting and valuable article, that is sure to command wide attention. All the world, says Mr. Johnston, knew that the black man in the South was a slave, but none recognized or were conscious of the fact that the white man was a slave also. It is true he could not be bought and sold, nor was he directly subject to the orders of a master, but, nevertheless, he was a bondsman, and the chains that encumbered him were as inexorable as those that bound the colored race. The negro was a slave to him, and he was a slave to the situation. He was charged with being an indolent lover of pleasure, lacking in industry, energy and enterprise, following year after year and generation after generation the same old beaten track, with no apparent wish to leave it and no capacity to do so if he wished. He was reproached for persisting long and tenaciously in one uniform course; that he was blind to the vast resources and capacities of the country he lived in; that he was surrounded by mines of wealth, and did not care, or have the vigor to utilize them, but "never," says Mr. Johnston, "was there a more mistaken idea, and never was there a people so little understood, or so much misjudged, as the Southern planter and farmer."

All over the civilized world, even in the United States, with its unlimited variety of products, its public lands and its institutions, which open any life to any of its citizens, the problem is: "How to provide employment for the laboring classes?" Here, business has been disturbed, loss and suffering incurred, and society shaken by the strikes which have become so frequent and so widespread, so easily induced and so hard to settle. The problem has engaged the attention, most profound, of statesmen, social scientists and governments in all European nations; but no adequate remedy has been yet found, nor a satisfactory answer to the question yet given. And the same problem existed in the Southern States, though in a different form from that prevailing elsewhere.

In New England farming was not a profitable pursuit, because the lands lacked fertility and the people of that section naturally turned to manufactures. When business was depressed and the market overstocked with the manufacturer was confronted with the question of what to do with those who had no work.

Exactly the same thing was going on in the South, but not so noticeably. The negroes were the laboring class there, and work and employment had to be found for them. The condition

of slavery itself kept them confined to their homes. They were not free to leave one employer and go to another, as the Northern and European laborer was, but master and slave were bound together—they were coupled, and the ligament was a strong one. What the Southern white man had to do was to see that his laboring class had work, and had it at home. He was restricted to one class of laborers and one locality. And he was obliged to conform his business also to the sort of work his men could do and what was most profitable.

Thus the persistence of the Southern man in adhering year after year to the same course of life did not arise from incapacity to engage successfully in some other, but purely from his surroundings. He could not abandon it without disastrous results to himself, to the negro, to the State and the world. If ever men were impelled by an irresistible force, it was the Southern white man. What did it matter to him if the earth beneath his feet was loaded with all the minerals which contribute to the wealth, convenience or enjoyment of manhood, or that the stream running by his door had water-power enough to turn a thousand wheels? He could not utilize them; he was bound hand and foot—bound to his slaves, bound to his plantation, bound to cotton, to his habits of life, to the exigencies of the situation, to the necessity of providing for his slaves, so many of whom were non-producers. There may have been more ways than one elsewhere to answer the question: "How to find work for the laboring classes?" and more latitude in solving it; but to him there was only one answer—labor in the field. He saw no other way, nor has the world seen any other.

The Southern planter, says the writer, did his work well. He had a hard and what would seem to have been almost an impossible task. He was brought into contact with a race who in their own country and in their native condition were all savages with scarcely a redeeming virtue. Out of such material he made men who became docile, industrious, kind and faithful; whose work reduced a vast wilderness to a state of cultivation. The influence, control and teachings that did this must have been judicious and prudent; no other course of conduct could have accomplished so much.

More than twenty years have passed, writes Mr. Johnston, since the negro was made free, and that period affords us some means of judging the effect on both races. This he rightly says is a momentous, a vital matter to the American people, and one that it behooves them to look into closely. This point he discusses with the same remarkable clearness that marks his introductory, and we commend it to the readers of the MANUFACTURERS' RECORD as one of the most important contributions ever made to the discussion of this subject.

The question is repeatedly asked why, if the South has such vast mineral wealth as is now claimed, was so little done to develop it prior to the war? Why did the Southern people with all this wealth beneath their feet leave it comparatively untouched? To these questions Mr. Johnston gives an answer, the correctness of which cannot be questioned.

The Emancipation of the Southern Whites

AND ITS EFFECT ON BOTH RACES.

By JOHN W. JOHNSTON, of Richmond, Va.

All the world knew that the black man in the Southern States of this Union was a slave, but none recognized, or were conscious of the fact, that the white man was a slave also. I don't mean that he could have been bought and sold in the slave mart, or that he was directly subject to the orders of a master; but, nevertheless, he was a bond-man, and the chains that encumbered him were as inexorable as those that bound the colored race.

The Southerner was generally admitted to be brave, kind and hospitable, and was credited with skill, forecast and vigor in political life; but he was charged by his Northern brethren with being an indolent lover of pleasure, lacking in industry, energy and enterprise, following year after year and generation after generation the same old beaten track, with no apparent wish to leave it and no capacity to do so if he wished. He was reproached for persisting long and tenaciously in one uniform course; that he was blind to the vast resources and capacities of the country he lived in; that he was surrounded by mines of wealth, and did not care, or have the vigor, to utilize them.

Never was there a more mistaken idea. Never was there a people so little understood, or so much misjudged, as the Southern planter and farmer.

But let those who find fault with him, and are fond of casting stones at him, recollect and understand that it was not of his free choice that he pursued the life he did; that he had no option, and was forced and restricted to one path by the existence of slavery and the actual and imperious necessities of the situation.

All over the civilized and christian world to-day,—even in the free republic of the United States, with its unlimited variety of products, its public lands and its institutions, which open any life to any of its citizens,—the problem is: "How to provide employment for the laboring classes?" Here, business has been disturbed, loss and suffering incurred, and society shaken by the strikes which have become so frequent and so widespread, so easily induced and so hard to settle. And all readers and observers of public affairs must be aware of the unsettled condition of things in Europe of a kindred character. The problem has engaged the attention, most profound, of statesmen, social scientists, and governments in all European nations.—But no adequate remedy has been yet found, nor a satisfactory answer to the question yet given. And the same problem existed in the Southern States, though in a different form from that prevailing elsewhere.

The lands in the New England States were not fertile and farming was not a profitable pursuit. This drove the people of that section into shipping and manufactures, and other pursuits than agriculture. The manufacturing establishments were "infant" in the beginning, but soon grew and expanded. The number of employees congregated in one establishment became large; and if business was depressed and the market overstocked, the manufacturer and the public were confronted with the question; of what to do with those who had no work.

Exactly the same thing was going on in the South, but not so noticeably. The negroes were the laboring class there, and work and employment had to be found for them. The condition of slavery itself kept them confined to their homes. They were not free to leave one employer and go to another, as the Northern and Euro-

pean laborer was, but master and slave were bound together—they were coupled, and the ligament was a strong one. What the Southern white man had to do was to see that his laboring class had work, and had it at home. He was restricted to one class of laborers and one locality. And he was obliged to conform his business also to the sort of work his men could do and that which was most profitable.

Now, while the lands in New England were poor, and agriculture not remunerative, just the reverse was the case in the South. The lands in the main were good, and their culture profitable. The South raised what the world wanted, and was obliged to have—cotton, rice, sugar, tobacco.

Considering, then, that the slaves must remain with their masters on the plantations; that they were good agricultural laborers, but not skillful otherwise; that their work was both remunerative and necessary, and the world could not get along without it, is it wonderful that the Southern man adhered to it, and can any one see how he could have done anything else? Under that system, the laboring class was kept employed and provided for, and engaged in a healthy and easy sort of work.

The persistence of the Southern man in adhering year after year to the same course of life did not arise from incapacity to engage successfully in some other, but purely from his surroundings. The negro was a slave to him, and he was a slave to the situation. He could not abandon it without disastrous results to himself, to the negro, to the State and the world. If ever men were impelled by an irresistible force, it was the Southern white man. What did it matter to him if the earth beneath his feet was loaded with all the minerals which contribute to the wealth, convenience or enjoyment of manhood, or that the stream running by his door had water-power enough to turn a thousand wheels? He could not utilize them; he was bound hand and foot—bound to his slaves, bound to his plantation, bound to cotton, to his habits of life, to the exigencies of the situation, to the necessity of providing for his slaves, so many of whom were non-producers. His laboring man could neither work well in a mine nor in a factory; and if he had been taken from what he understood and could do well, and put at what he did not understand and could not do well, the fields would have grown up with weeds and briars, and loss and ruin inevitably follow. There may have been more ways than one elsewhere to answer the question: "How to find work for the laboring classes?" and more latitude in solving it; but to him there was only one answer—labor in the field. He saw no other way, nor has the world seen any other.

The Southern planter did his work well. He had a hard and what would seem to have been almost an impossible task. He was brought into contact with a race who in their own country and in their native condition were all savages with scarcely a redeeming virtue. Out of such material he made men who became docile, industrious, kind and faithful; whose work reduced a vast wilderness to a state of cultivation. The influence, control and teachings that did this must have been judicious and prudent; no other course of conduct could have accomplished so much.

But the time came when the negro was suddenly manumitted, and the same act that manumitted him emancipated his master also. Both were then free to do what they pleased, engage in what occupation they choose, go where they fancied. It was a wonderful change for both, and could not but be pregnant with great consequences—for good or for evil, or both. More than twenty years have passed, and that period affords us some means of judging the effect on both races.

It is a momentous, it is a vital matter to the American people, and one that it behooves them to look into closely.

No way to form something like a correct opinion on this point is so good as to examine into the fruits of the labor of each race, so far as reliable statistics afford the data. Before the war the main products of the South (and by that term I mean the states which passed ordinances of secession and constituted the Southern Confederacy) were tobacco, cotton, rice and sugar. Let us see how much of each was produced in the South in 1860 and prior thereto, and how much now, and whose labor raised it then and raises it now.

As the chief and most valuable of these products let us begin with

COTTON.

In 1860 the population of the United States was 31,443,321, of whom 4,441,830 were colored. This embraced the free negroes who numbered between four and five hundred thousand, and were located entirely in the North. The South, that is the seceding states, had 9,152,250, of whom 3,653,321 were colored. The last three years prior to the war gave this result:

	Bales.
1858.....	Cotton 3,257,397
1859.....	Cotton 4,018,914
1860.....	Cotton 4,801,202

This is an average of 4,045,848 for the three years, all, or nearly all, the product of colored labor—for the best estimates only allow 10 per cent., before the war, as the result of white work. As the number of colored people in the South was 3,653,321, this is about equal to a bale and one-tenth each.

The crop of 1879, the one the figures of which are given in the census, was 5,757,397 bales, a small portion of which, however, as was the case before the war, was not grown in the seceding states. The same year the population in the same states of negroes was 5,357,194. If all the cotton, or as much of it, as before the war, had been grown by colored labor, the product would have been about the same in 1880 as in 1860. But whereas in 1860 only 10 per cent. was raised by whites, in 1880 and the subsequent years fully half of it was the direct outcome of their personal labor in the field. Statistics gathered from the census and by that reliable and valuable publication, the MANUFACTURERS' RECORD, develop these facts. The amount of cotton resulting in the South from the labor of the two races for the following years was:

	White.	Colored.
1880.....	44 %	56 %
1883.....	47.0 %	52.1 %
1884.....	48.4 %	51.6 %
1885.....	50.1 %	49.9 %

The whites continually increasing and the blacks decreasing. On this basis the colored people only in 1879 or 1880 grew 3,225,000 bales of cotton, though they numbered five millions and nearly a half, or not so much as three-fourths of a bale to each. And taking the crop of 1886, which was 6,550,215 bales, and estimating the number of blacks, according to the ratio of increase for previous years, at 7,250,000, we have the following comparative statement.

	1860.	1880.	1886.
Col'd Population...	4,441,830	5,357,194	7,250,000
Bales.....	4,801,202	5,757,397	3,150,000

The amount credited to the colored people, being in 1886, their proportion of the whole, on the basis of 49 per cent. to them and 51 for the whites.

Speaking of the relative product of cotton by white and black labor the census of 1880 says:

"The best possible comparison (of white and black labor) is that made between the Northern and Southern groups of the Northeastern prairie region, where the best soil under negro preponderance, and the very center of the cotton belt, yields only an average of 0.33 bale per acre, while northward, under the influence of a predominance of the whites, and a conse-

quent sub-division into small farms, the product per acre rises to an average of nearly 0.40 bale. Under the same influences the average product of the Pontotoc ridge, with inferior soils, on the whole exceeds by 4 per cent. that of the black prairie region. Similar relations are abundantly exemplified among the counties of the yellow loam region."

And the same authority says: "The tendency towards raising home supplies is decreasing in Morehead and Madison (in Mississippi) on account of the practice among the negroes of stealing swine."

TOBACCO.

In the South in 1860 the tobacco crop was this:

	Pounds.
Alabama.....	222,914
Arkansas.....	960,980
Florida.....	828,815
Georgia.....	919,318
Louisiana.....	30,940
Mississippi.....	159,141
North Carolina.....	32,553,250
South Carolina.....	104,412
Tennessee.....	49,448,097
Texas.....	97,914
Virginia.....	123,908,312
	209,623,006

And the total crop of the whole country was this:

	Pounds.
1860.....	434,209,461
1880.....	470,674,292
Increase in 20 years..	36,464,831

In 1860 the Southern States, as shown by above table, grew..... 209,623,006
Other States and Territories..... 434,209,461

While in 1880 it was this:

The same Southern States..... 142,046,190
Other States and Territories..... 328,628,006
470,674,292

So that in the twenty years named there was a decrease of production in the South of 67,577,894 pounds; and in Maryland, where colored labor is still used in that crop, the decrease was 12,328,818 pounds. The gain is in the North and in the Southern States where white labor predominates, as for example:

	Pounds.
Connecticut 1860.....	6,000,133
Connecticut 1880.....	14,044,652
Increase.....	8,044,519

Or about one hundred and thirty per cent.

	Pounds.
New York 1860.....	5,769,582
New York 1880.....	21,956,213

Increase..... 16,186,631
Or about three hundred per cent.

	Pounds.
Pennsylvania 1860.....	3,181,586
Pennsylvania 1880.....	30,943,272

Increase..... 27,761,686
Or about one thousand per cent.

And in Kentucky, where white labor largely exceeds the colored, the increase has also been great.

	Pounds.
1860.....	108,126,840
1880.....	171,120,789
Increase.....	62,993,949

SUGAR.

The crop of sugar in 1860 was:

	Hogsheads.
Alabama.....	175
Florida.....	1,669
Georgia.....	1,167
Louisiana.....	221,515
Mississippi.....	506
North Carolina.....	108
South Carolina.....	2
Tennessee.....	5,003
Texas.....	230,484

From 1879 to 1885 it was:

	Hogsheads.
1879.....	169,972
1880.....	218,314
1881.....	122,082
1882.....	241,230
1883.....	221,515
1884.....	170,431
1885.....	231,290

Equal to an average of 196,513 hogsheads,—a decline of 34,000 hogsheads, or about one-seventh of the whole crop.—And this in the face of an unprecedented and wonderful increase of consumption; for, whereas, in 1860 we consumed in the United States only 415,281 hogsheads, in 1880 we used 819,341, of which 730,519 were imported and only 88,822 of home production. And in 1885 these were the figures:

	Total consumption, 1,097,445 hogsheads.
Imported.....	996,599
Domestic.....	100,846

The sugar we import comes from the West Indies and the Hawaiian Islands, and costs the people the enormous sum of \$72,539,657.

We have a reciprocity treaty with the Hawaiian Islands, by which their sugar is admitted duty free, in consideration of the fact that certain of our exports to the Island are relieved of duty. Much the greater part, however, comes from the West Indies and pays a duty, for the double purpose of raising revenue and protecting a home industry, which last it fails to do.

RICE

Is only grown in appreciable quantities in South Carolina, Georgia, Alabama, Florida, Louisiana, Mississippi and North Carolina.

	Pounds.
The crop of 1860 was.....	187,167,032
The crop of 1880 was.....	110,131,373

Decrease in 20 years..... 77,035,659

There came from the Hawaiian Island, free of duty, 8,291,360 pounds; and the total importation for last year was:

	Pounds.
Cleaned Rice.....	43,445,483
Rice Meal.....	36,767,183

And this great falling off in home production has taken place, notwithstanding a large advance in the price, viz:

	Highest.	Lowest.
Price per 100 lbs. in 1860.....	\$3.00	\$4.02
1880.....	5.50	8.00

The prices have almost doubled in two decades, which, according to all recognized principles of political economy, ought to have stimulated production.

Thus, it is conclusively demonstrated that the South has fallen off absolutely and largely in the three staple productions of rice, sugar and tobacco, and, so far as the labor of the colored race is concerned, in cotton also. The Southern boom has not been in that direction, and this great loss in those necessary articles stands in curious contrast with the sudden bound, by which the South has leaped from poverty and desolation to a condition of present prosperity, and the promise of far greater in the future.

I will offer, further on, what I consider the proper explanation of this seemingly anomalous result of a decline in a number of industries, to which the soil and climate of the South are suited and a marvellous growth in others, and in the meantime, will present the reader with some account of industry, enterprise and energy and their results, more agreeable than the picture of decline, heretofore drawn.

It can no longer be said, even by the enemies of the Southern white man, that he is not now, at least, making good use of the bounties which nature has bestowed upon his country; for there is scarcely anything in the way of a natural resource, or of an industry suitable or practicable, that is not recognized and developed or put in the process of development. From railroads, mines, manufactures, commerce and education, down to trucking and the growth of small fruits, everything is active. Materials once thrown away, are husbanded and made profitable; and it is not extravagant to say, that no five years in the history of any people, ancient or modern, exceeds in material advancement, the past five years in the South, notwithstanding the decline already noted.

To make this statement good, let me take the industries one by one, and show, from reliable statistics, how some have grown from small beginnings into grand proportions, and others actually created.

In doing this, it may not be unprofitable or uninteresting, to make a comparison on some points between the Southern and Northern States. But in this work of computing the relative wealth of the two sections, the shipping and carrying interests, once so great and valuable to the northern states, may as well be left out of the account. The North, which enjoyed practically in former times, the benefits of

this business, has lost it, and there are reasons why it cannot be regained—at least at any early period. How great the loss, these figures will show.

In 1860, the tonnage of the world was as follows:

The United States.....	5,539,818 tons.
Great Britain.....	5,895,569 "
All other nations.....	5,800,707 "

The United States had nearly one-third of all the tonnage of the world, was almost equal to Great Britain, and fell only a little short of all other nations combined. Our tonnage was sufficient to transport all our own products and a good part of those of other peoples. Since 1860, the increase of the foreign commerce of the United States has been enormous; and every maritime nation has obtained a portion of it, except the United States. The increase, up to 1880, is as follows:

Great Britain from 935,000 tons to 7,903,000 tons.	
Germany.....	166,000 "
Sweden & Norway.....	30,662 "
Austria.....	from 1,477 "
Portugal.....	4,737 "

I give below an official statement showing the total imports and exports of the United States for the three years just preceding the war, and six years after it, beginning with 1881:

	American Vessels.	Per Ct.	Foreign Vessels.
1858.....	\$447,191,304	73.7	\$ 160,006,093
1859.....	465,741,381	66.9	229,316,211
1860.....	507,247,757	66.5	255,040,736
1881.....	268,080,003	16.	1,378,556,017
1882.....	242,550,815	15.5	1,284,448,801
1883.....	261,718,236	16.3	1,290,000,411
1884.....	264,722,452	16.4	1,194,118,585
1885.....	225,118,544	16.	1,108,302,624
1886.....	227,947,000	16.	1,139,636,971

It has been asserted that the loss of our carrying trade was due to the depredations of Confederate cruisers. But this explanation is quite inadequate, for an inspection of the above table will show that the decline of American shipping and the growth of foreign had begun prior to the war. The increase of American shipping engaged in foreign trade from 1858 to 1860 was only about 11½ per cent. whilst that for the same period of other nations was more than 50 per cent.

The causes of the great decrease of American tonnage lie deeper than the war, the effect of which, if it had been the cause, would have been only temporary. They are mainly two:

1. No great producing nation has ever been also a carrying one; there must be a division of labor among nations as among men. Barrenness of soil and poverty of native resources drive a people to commerce, just as the want of land makes a man a mechanic or trader. Arabia was a land of rocks and deserts, yet it and the cities of Sidon and Tyre did the shipping for the world in former times, and carried what Egypt produced. And later on the same work was done by Venice, Spain and Portugal. This country is the modern Egypt; it produces and, in the order of things, others carry.

2. There are so many channels for investment and so many ways of making money, far beyond any profits that arise from the use of vessels, that capital will seek them for years to come. The growth of the South itself will be one means of retarding the revival of American tonnage.

The investments to be made there are so inviting, and the profits expected so large, that the monied man rushes there, and builds a railroad, or opens a mine, or founds a city, or engages in manufactures. He looks for new fields, and finds them, too; and is content to let England or any other nation do our carrying across the oceans, as long as his money grows and swells where he has placed it.

Having shown the decrease of production in the South of articles that were staples before the war, and are yet, it is a pleasanter task to look on the other side of the picture and exhibit to the reader its enormous growth and progress in new industries, and its general development in other directions. And first, as to

MANUFACTURES,

in which so little was done, or could be done, when the blacks were slaves and their masters bondsmen also. I take again recent statistics from the MANUFACTURERS' RECORD of cotton mills, &c., in the South:

	1860.	1886.
Cotton mills.....	190	353
Spindles.....	713,960	1,460,007
Looms.....	15,229	27,004

The number of Southern manufactories and their products are given at these figures, viz:

Number in 1879.....	24,562	Products.....	\$315,924,794
" 1885.....	51,419	"	508,802,000

An increase in number of 40 per cent., in capital of 93 per cent., and in employees of 63 per cent.

This result has probably been accelerated by the prevalence of strikes at the North and Northwest, and their comparative absence in the South,—a thing illustrated by more than one case. It is stated that a large operator in the State of New York has determined to remove his capital to the South, assigning as his reason that he has suffered so much loss, inconvenience and annoyance from the strikes, and his business rendered so uncertain and precarious; that he is unwilling to risk his capital and expose himself to constant worry at any point where a strike may be called at any time, and at the instance, perhaps, of some wholly irresponsible or malicious person.

In fact, the difference in favor of the South over the North, in the items of rent, fuel and clothing, will hereafter be one of the factors among capitalists in considering in which region they will venture their manufacturing capital,—to say nothing of greater security from strikes,—and will be a strong attraction to the laboring man also.

This increase of manufactures, of course, embraces small industries as well as large; but these small industries, prosecuted without much capital and partly by the labor of the proprietor himself, after all contribute about as much as the larger ones to the general prosperity of the country. They are conducted without the embarrassments and troubles surrounding larger enterprises which employ numbers of hands, where the owner and the men often come to consider themselves natural enemies; where the seeds of socialism and communism may be sown and grow, and where hundreds of men are sometimes thrown out of employment with all its attendant sufferings and ills.

In the first six months of 1887 the new capital invested in manufacturing in the South reached the vast sum of \$161,117,000.

IRON.

It is in the development and manufacture of iron that the greatest progress in the South has been made. That industry heretofore has been almost monopolized by Pennsylvania; but it has been demonstrated that iron can be made cheaper in the South than in the North, which fact, together with great abundance and excellent quality of the ores, and the cheapness of land containing them, threaten to effect a revolution, and transfer the bulk of the capital now engaged in the iron business from the North to the South.

To illustrate—the pig iron made in the following States for the years named was as follows, viz:

Virginia, Alabama, Tennessee, }	1880.	1884.
	178,006 tons.	481,744 tons.

And the manufacture of steel took even a greater leap, for in 1885 it was 149,381 tons and in 1886 it was 245,606 tons.

The increase of iron production in the South was more by 9,500 tons than the net increase in the whole United States. The whole country taken together produced less in 1884 than in 1880. In other words, the product decreased largely in

the North and increased largely in the South during this period.

It is not only in the production of pig iron that progress has been made, for the South makes the iron and then converts large quantities of it into machinery. During the first half of the year 1886 the investments in the South in that direction were \$63,618,200 and for the corresponding half of 1887 were \$161,117,000. The machine works at Roanoke, Va., where six or eight years ago there was only a little village of two or three hundred people, are now making cars for Northern railroads. The population of the place in 1886 was 7,200. The assessed valuation of property in 1880 was only \$250,000 and in 1886 it was \$3,950,000. Here is a description of the Roanoke Machine Works, written by a person who made a special examination of them.

"Shops for the construction of locomotives, stationary engines and cars of every grade and description, covering many thousands of square feet, and supplied with all the ponderous and complicated machinery necessary to make all sorts of bridges, and all kinds of cast or forged iron work. This does not mean merely that the machinery or cars may be put together here, but, except a few specialties, every part of the locomotive or car, from the wheels to the last ornament, is made and fitted as well as 'set up' here. Their output is 96½ tons per diem for the year. The raw material of iron and steel used is largely supplied by the Crozer Steel & Iron Co., whose blast furnace is a quarter of a mile away. This company derives its ores (brown hematite) mainly from the upland mines owned by it near Blue Ridge station, ten miles eastward, and from the Houston mines, fifteen miles northward."

Such things can only grow out of the fact that the ores are better in the South, or at least of equal quality as in the North, and can be converted into iron cheaper; or from these causes combined. The transfer of capital and business from the North to the South cannot be an accident, or a mere casual and phenomenal wave that will soon subside. What has already been developed about it warrants the belief that it will continue, and has its foundation on sound business principles.

Iron is made in England at a cost of about \$10.25 per ton, and here is a statement made by Mr. Rothwell, an expert, of the cost of making it at Birmingham:

"In a late number of the Industrial South mention was made of visit to Birmingham, Ala., by Mr. R. P. Rothwell, C. E., M. E., editor of the New York Engineering and Mining Journal, and of the very favorable conclusions he had formed of the advantages of that locality for the manufacture of iron. Mr. Rothwell is a very high authority in such matters, and we regret that he had not time to extend his investigations into other portions of the South, and especially into Virginia, where we feel well assured more than one site for iron and steel-making works on a large scale can be found, that, to say the least, are not inferior in advantages to Birmingham. In a recent issue of the Journal, Mr. Rothwell, basing his remarks on the statement of the Iron Trade Review that the actual cost of making Bessemer iron at Lake Erie ports is \$14.23, says:

We are at present unable to give full information as to the quantity or quality of the alleged Bessemer ores of Cartersville, Ga., but we can give the cost of making iron from native ores (fossil red ores and limonites) in the Birmingham district of Alabama. Though these figures are not to be applied to any particular works, yet they are 'absolute figures of cost,' and nothing is 'assumed,' except the two items of renewals and incidentals, which Mr. Pechin also assumes:

100 of iron at 2 cents a unit.....	\$2 00
Fuel, 1½ tons.....	3 50
Limestone.....	30
Labor.....	1 50

Renewals and incidentals..... \$7 30

Total cost, exclusive of interest on capital or profit on mining.....\$8 30

To what this is tending it is not hard to foresee. Southern iron is going North, and the following extract from the MANU-

FACTURERS' RECORD shows how wide is this distribution:

TENNESSEE COAL, IRON & RAILROAD CO.
NASHVILLE, TENN., Dec. 21, 1886.

Editor Manufacturers' Record:

We note with approval your editorial of 11th inst. on Southern iron making. You might truthfully have added for the information of your Eastern contemporary that this company is making with its five furnaces now in blast as much pig iron as the Thomas Iron Co. with its twelve. And that said iron is being shipped from Tennessee and Alabama to Canada, Connecticut, Massachusetts, Rhode Island, New York, New Jersey, Pennsylvania, California, Utah, Nevada, Montana, Texas, and all the intervening States and territories that use iron. Is there a single Eastern company that can say as much?

Roanoke and Birmingham are not the only towns the growth of which has been phenomenal. Pocahontas and Newport News, the latter being the Atlantic terminus of the longest line of railroad connection in the world, are two conspicuous instances. Six years ago the site of Pocahontas was in the woods and there was not even a cabin near it. Now there are on an average 1,000 miners employed there, and about 150 car-loads of coal and coke shipped daily. At Newport News six years ago there were only deserted fields. Now its wharves, elevators and facilities for loading and unloading vessels equal those of any port in the United States. The last half of 1884 it shipped 623 bushels of grain; the first half of 1885, 754,000, and the first three months of 1886, 945,000.

There were mined in the South in 1880 of coal 6,048,571 tons, and in 1886 the amount was 13,820,713, or more than double.

Since 1880 there have 14,000 miles of railroad built in the South at a cost of \$600,000,000—the total cost of all the railroads being \$1,300,000,000. The number of miles in 1880 was 20,642 and in 1887 it was 33,767.

The increase of agricultural products has kept pace with other industries. The quantity of corn, oats, live stock and farm products in the years named are shown by the following tables:

	1879.	1885.
Corn, bus.....	334,000,000	499,000,000
Oats, bus.....	42,000,000	78,000,000

	1880.	1885.
Live stock, value....	\$439,000,000	\$599,900,000

And a general summary of the comparative products of agriculture, manufactures and mining shows this:

	1880.	1885.
Agricult. products..	\$ 549,850,000	\$ 699,077,000
Stock and dairy.....	130,000,000	168,500,000
Manufactures	315,924,774	445,656,000
Mining.....	6,975,760	20,872,000
	\$1,003,353,534	\$1,304,105,000

The increase from 1880 to 1885 being about \$300,000,000, or \$60,000,000 annually.

[TO BE CONTINUED.]

Progress at Tuskaloosa.

TUSKALOOSA, ALA., July 1, 1887.

Editor Manufacturers' Record:

The Tuskaloosa Coal, Iron & Land Co. has purchased a large steam drill. Will drill on the lands in the vicinity of the city preliminary to opening a large coal mine, to be to Tuskaloosa what the Pratt mine is to Birmingham. The Tuskaloosa Northern Railway is being located. Contracts will be let within sixty days. Bids have been called for by the engineer.

Paid-up stock of the Tuskaloosa Coal, Iron & Land Co. will be received at its office in Tuskaloosa, Ala., for sixty days from July 1st, 1887, in payment for such lots and lands as it has now on sale or may place on sale during the period named at 25 per cent. over face value. The price of lots to be the same as fixed at the sale on April 20 for such lots as were then offered. The price on such other lots and lands as may be placed on sale to be fixed by the president of the company.

Jordan, Lupton and associates, of Dallas, Texas, closed an agreement yesterday with

the Tuskaloosa Coal, Iron & Land Co. to establish immediately at Tuskaloosa a first-class brick and tile plant, making the second industry of this kind which has been located here. It is the purpose of these gentlemen to establish in connection with the manufacture of brick and tile a colony of building artisans, carpenters, painters, masons, paper-hangers, &c., and to contract for house-building in every detail. The plant will be shipped to Tuskaloosa at once.

Other capitalists of Dallas are prospecting in Tuskaloosa for a site for a furniture factory, and in view of the liberal policy which obtains here towards all manufacturing industries, their location here is almost certain.

The engineer-in-chief of the Tuskaloosa Northern Railway has advertised for bids for the construction of the first section of the road.

Rights of way are being secured and active preparations made for building the Macon & Tuskaloosa Railroad, which will connect Tuskaloosa with the Mobile & Ohio system. The survey of the Florence & Tuskaloosa Railroad has been commenced.

J. W. CASTLEMAN.

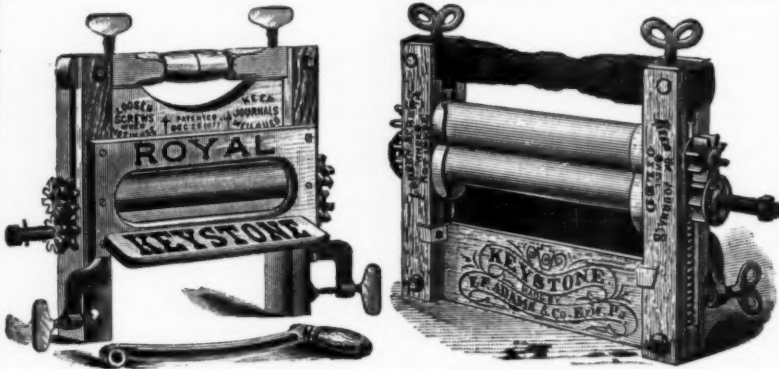
THE tax assessments of Jefferson county, Ala., in which Birmingham is located, will exceed for the present year \$30,000,000, or an increase of \$17,500,000 over 1886. This tremendous increase will cause a reduction of 40 per cent. in the rate of taxation.

Keystone Wringers.

The Keystone Wringer, which is shown in this illustration, has many points of decided merit.

The rolls are made by a patent process of white rubber clear to the shaft. No twine or wire or fibrous material, or anything else but rubber being used. The rubber is vulcanized upon the shaft and cannot be taken off except by cutting it off. They are claimed to be more elastic than other rolls because there is nothing but rubber on the shaft, and more durable because there is no twine or fibrous material to rot out, or wire to cut the rubber. These rolls have been subjected to the most severe tests and hardest usage known to wringer manufacturers.

The wood frame wringers are made of hard Maple and are finished with three coats of varnish.



THE KEYSTONE WRINGERS.

The springs in the Keystone Wringers are made from the finest Bessemer spring steel, and tinned; they are very long and heavy, giving them great elasticity and durability; on this account the Keystone Wringers have a great capacity.

The clamps on the Keystone Wringer are swiveled to the frame so that they will adapt themselves to any shaped tub, and the wringer stands inside the tub so that all the water goes back into the tub.

The F. F. Adams Co., of Erie, Pa., manufacture these well known wringers in all the leading styles and sizes.

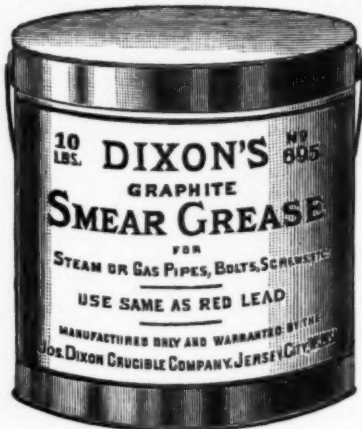
One of the strongest points in the construction of the Keystone Wringers is that instead of using rubber or wood for the springs, which soon lose their elasticity, two long heavy coiled wire springs, made from Bessemer steel and tinned are used. They are placed below the lower roll and occupy that part of the wringer frame that is necessary

to accommodate the clamps, admitting the use of two very long springs that will exert all the pressure necessary and give the wringer fully double the capacity of any other form of spring. The great length of the springs gives them, it is said, greater durability than can be obtained from any other form of spring of any kind of material, and they exert all their pressure directly upon the journals of the rolls without injury to the frame.

These wringers all work very easily and at the same time wring dry. Any further information will be furnished by addressing the manufacturers.

A New Use for Graphite.

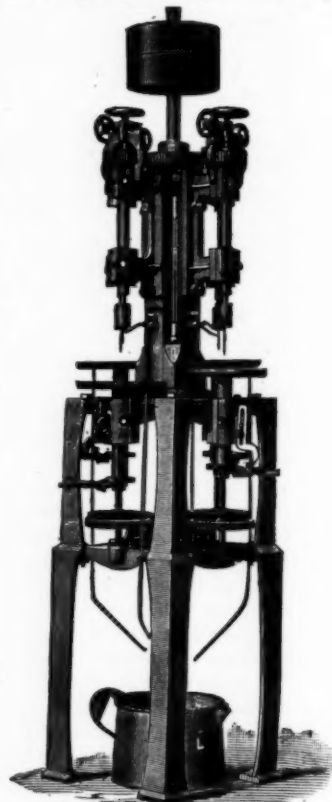
From time immemorial steam and gas fitters have used red lead in making joints and connections. It has been a matter of tradition with them that nothing else could possibly answer as well. However, after a few



months have passed, it is found that the red lead has "set" and it is next to impossible to open a joint. The fitter applies his tongs with all his strength, and in many cases, the joint is finally broken, and the tongs sprung, sometimes beyond repair. Dixon's graphite smear grease, it is claimed, makes a much better joint. It is made of properly pulverized and perfectly pure graphite, mixed with best boiled oil. The graphite being a natural lubricant it enable the fitter to make a much tighter and, consequently, a much more perfect joint. Further a joint so made can, it is stated, remain three months, three years or

Seng's Automatic Drill Press.

The accompanying illustration represents a new device in automatic drill presses, manufactured by H. Seng & Co., 11 and 13 S Canal street, Chicago, Ill. The press represented in this cut has four spindles. The number of spindles may be increased or diminished as desired. This tool is automatic in every respect. It oils its own work, feeds its own drills and stops feed, and returns table instantly to starting point. The operator has to put the work in and take it out, passing from one spindle to the other. A boy of ordinary intelligence can, it is said, operate it with ease, and do the work, is it claimed, of three other presses, besides a great saving in oil and drills. The danger in breakage of drills is prevented by a regular and steady feed, and can be worked 1, 2, 3, 4 or more spindles at once. For instance in drilling wrought iron, steel or any material in which oil or any other lubricant is needed, the reservoir is filled to the desired depth, which can be ascertained by the glass gauge on the side of reservoir, then placing the work in pre-arranged jigs on the tables and having set knock-out in proper position so as to disengage foul in order to allow table to return to its starting point, everything is ready. Now, the parts



SENG'S AUTOMATIC DRILL PRESS.

to be drilled being in position, the buttoned foul is turned to the right, which closes the clamp on to the screw, the screw receiving its motion causes the stand or drill table to rise, feeding the required depth, when the knock-out having been previously adjusted, disengages the buttoned foul, allowing the spring clamps to open and release the screw when the table instantly returns to its original position. The oil is turned on by the small drip cocks. The overflow or waste oil is caught by the table, being provided with grooves to conduct the oil through the waste pipe into the strains can, from which it may be returned to the reservoir.

This drill press, as represented in cut, is made for using drills from the smallest up to 1/4 inch in size. To drill holes from 1/4 inch to 1/2 inch larger machines must be made. In drilling holes from 1/4 to 1 1/2 inch in depth takes one boy to attend the 4 spindles. From 3-16 up to 1/2 inch in depth requires two boys to work the machine, each one attending to 2 spindles. Further information regarding these machines will be furnished upon application to the manufacturers, W. Seng & Company.

IN sending on his subscription, Mr. Geo. P. Rowe, of St. Joseph, Mo., writes: "The MANUFACTURERS' RECORD is the most powerful advocate the South has to-day."

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South, cannot find a better medium than the MANUFACTURERS' RECORD.

MINING NOTES.

By T. K. BRUNER, Raleigh, N. C.

FISHER AND MILLIS HILL MINES.

These valuable mines, situated in Guilford county, but a few miles from Greensboro, the county town, are among the most valuable as well as the most productive in North Carolina. Mr. B. S. Loney, the superintendent, is responsible for the greater portion of the report herewith submitted.

On the 15th of June they encountered in the fifth, or bottom level, 230 feet from the surface, what they call their No. 1 chute, and found a vast improvement in both quantity and quality. The chute has been good from near the surface down; but it has never been so rich as the ore recently encountered. The material is essentially brown ore, little or no sulphurets to contend with. Some of the ore mills as high as \$100 to the ton. The average is not near so high. The vein is from 3 to 4 feet in thickness and has been driven upon in this level about 30 feet, with good ore still in the face of the drift. As yet no stoping has been done.

The No. 2 chute, which they expect to cut about 100 feet ahead of the ground now being broken, is expected to prove equally as much improved, though it has never been as rich as No. 1 or No. 3. It is larger; at times the vein reaches a width of from 8 to 10 feet.

No. 3 ore chute is some 250 feet ahead of the present work and it is expected to sustain its former yield, if not greatly improve, when reached.

On these three chutes of ore they have been running their stamp mill incessantly since January 1, 1886, and at no time have they had better results than at present. They have a long continued run ahead of them which promises, from the ore recently encountered, and now blocked out ready for stamping, to increase the former production to a considerable extent. The fact that they have been so steadily improving also gives them hope of richer ore ahead.

Their stamp mill runs 24 hours a day, starting at 12 o'clock on Sunday night and runs until that hour on Saturday night. The average number of tons worked per day is 16, or 96 tons a week.

The ores are trammed underground in cars run on 12 pound steel rail and hoisted by steam to the surface; there automatically dumped into the landing car which runs into the mill or to the waste heap as the case may be. The whole plant is arranged as nearly automatic as the nature of the surroundings will permit.

EXTENT OF DEVELOPMENT.

They have over 3,000 feet of levels besides the winzes, upraises, stopes, &c., all connected by rail with the main working shaft. The pumps handle easily the 175,000 gallons of water necessary to be raised to the surface every 24 hours.

The Fisher and Millis Hill Mining Co. is an organization of Northern capitalists, with headquarters at Syracuse, New York. They are working these mines on their merits and not for the stock boards, as so many are, in parts of the State. It is stated that a dividend will shortly be declared from the profits of the mine.

STOKES COUNTY IRON.

The good people of Stokes county are becoming impatient in their wait for the coming of the "iron horse." They are enthusiastic over the very superior iron ores which are so abundant around the town of Danbury. Those familiar with the territory estimate the area at 25 square miles of iron; meaning that iron in workable quantity may be found on any one of the 25 square miles. While the surveys of this district may not warrant the assertion made, it is undeniable that vast and valuable deposits of superior iron are to be found there. Outcrops of

this material are frequently met with, and this fact may account for the rather extravagant language of the local enthusiasts. Prof. Hanna says that there are beds or veins there of eight and ten feet in thickness. The ores are all magnetites, with sometimes a small admixture of hematite. The purity of these ores is conspicuous. Phosphorus is wholly wanting. Manganese appears as only a trace in the analyses, but it must exist in larger proportions in some parts of the bed, as spiegeleisen is occasionally an accidental product."

Chattanooga's Great Progress.
Value of Street Car and
Dummy Lines.

CHATTANOOGA, TENN., June 30, 1886.

Editor Manufacturers' Record:

It is hardly possible for those who have never visited Chattanooga to realize its greatness as a city and its importance to the outside world. The succession of improvements in this city and vicinity is already demonstrating the great advantages of Chattanooga. The readers of the MANUFACTURERS' RECORD can hardly understand the city's geographical position for health and manufacturing facilities of every description without visiting the place. When the writer came here two years ago it was a promising city in natural advantages, but the spirit of a great business resurrection had not visited it then, and it is singular how certain incidents will happen when least expected and change the whole spirit of a municipality and things in general. Early last year Chattanooga took its first stride (of any importance) toward permanent improvements in conceiving and carrying into execution the idea to erect two handsome blocks on Eighth street. The sites where these handsome structures were erected were previously an eye-sore to every one passing along the street, as they were not much better than mud holes and in the heart of the city. These buildings were planned and built and it conveyed the spirit of improvement to others. So the good work was kept up until the outside world learned something of our city and the valuable position in which it is situated as a distributing and manufacturing center. This awakening of the energy of our citizens led to the greatest boom any point in the New South ever experienced. At one time this spring the transfers in real estate reached one million dollars a week. These were not paper transactions either. The excitement caused by this boom will never be forgotten here. The poor were made almost instantly rich and the rich, richer. Now, Chattanooga has her reputation known far and wide, so speculators, manufacturers, merchants and experts in all kinds of trade are coming to us daily. The railroad facilities of this city can hardly be surpassed and surely not south of the Ohio river. Eight separate and distinct railroads diverge from here to almost all points of the compass. It is not my intention to start out with a "Romance of the South" and locate Chattanooga as the hub of the story. But I do mean to give your readers some of the points of interest connected with the city. I will also say there are some four or five projected railroads coming here very soon. It is the facilities of transportation, energy and legitimate dealings with those who have money and brains, and who wish to locate at this most desirable point, that are building up a large center of trade. To illustrate what has been done here in advancement and improvements in the last 18 months I will name some of the leading enterprises that have been completed and in operation. The greatest convenience to our suburban improvements and the public generally is the completion of the incline railroad up Lookout Mountain, which is now in successful operation, and cost about \$150,000. This same company is building a

handsome hotel on the point of old Lookout. The street railroad has developed into a system as good as can be found anywhere, about 15 miles having been built and newly equipped and now running to almost every part of the city. The Roan Iron Co's steel rail mill has been in operation a month or two. The expenditure on this improvement was about \$250,000. The improvements and additions to the Chattanooga Foundry & Pipe Works cost about \$75,000, which has increased their output to 60 tons of cast iron water and gas pipe per day. The Belt Railroad system is perfect, almost encircling the city, and has more business than it can handle. The Belt Railroad people have also built and handsomely equipped a magnificent steam dummy line to all the suburban villages and resorts. This is the greatest boon to the citizens of our city, especially to the mechanic and laboring classes, as for 5 cents each way one can go for miles into the balmy shades of the mountains and valleys for a day's recreation. This company is laying out grounds for recreation purposes, and making other improvements to make their popular line more attractive to the public. The South Tredegar Iron Works have a successful steel converter in operation. The Hamilton Lumber & Manufacturing Co. is nearly ready to start up their mill and factory. The East Tennessee Manufacturing Co. are rushing their large factory for building supplies, and will start up on a large scale. The Chattanooga Coffin & Casket Co. have commenced their large factory, and will be in operation in the early fall. The Chattanooga Tool Works Co. have their factory well under way, and will start in a few months making farm and garden tools on a large scale. Quite a number of smaller enterprises are getting ready to start up. The land companies chartered and in operation, with capitals from \$50,000 to \$12,000,000, number 7 or 8, and are all doing good business. Some 5 or 6 companies are boring for gas in the vicinity of the city, and with flattering prospects of getting it. The Lookout Mountain Railway Co. is now at work constructing a broad gauge road up and around Lookout mountain. They have laid off a town on top of the mountain, and are building a fine hotel. The building interest here has gone far ahead of any expectation. I should not miss it much if I put the value of buildings erected at \$2,500,000 during the last 18 months, and the architects and builders say there is no let up in business. The new directory of the city will foot up about 40,000. J. L. A.

Gadsden, Alabama.

We invite the attention of our readers to the advertisement of the advantages of Gadsden, Ala., which appears in this issue. Gadsden is one of the most promising industrial centers of the South, and a great future seems assured. Mr. M. L. Foster, the secretary of the Gadsden Land & Improvement Co., sends us the following points regarding it. He says it is "the coming city of Alabama, situated in the midst of the richest mineral section of the State, on the west bank of the Coosa river, on an elevated plateau forty-five feet above the highest water, with two rushing mountain streams on north and south side of city, furnishing finest drainage of any city in mineral section of Alabama. Iron ore working 45 to 50 per cent. is delivered at our furnaces at 65 cents per ton; this is soft red ore, and is worked direct from the mines, no roasting or washing necessary. Wood costs less than \$1.25 a cord, and charcoal can be contracted for at 5 cents per bushel in large quantities and for long periods of time. Charcoal car wheel iron can be made here for \$8.50 to \$9 per ton. Our saw mills turn out 20 million feet of best car material per annum, cutting sills up to 70 feet. The low prices at which car material, iron and lumber can be secured here make Gadsden the best point on the Continent at which to manufacture railroad cars.

The low lands in adjacent valleys furnish as fine oak and hickory as grows, and this material for wagon work can be had at prices that will enable wagon makers to turn out best class of wagons at prices to defy com-

petition. In short, any industry in wood or iron can buy its raw material here as cheap if not cheaper than at any point North or South.

Our freight advantages will be equal to any city South as soon as the railroads now building are completed, and all of them will be completed by January 1st, 1888. The Coosa river is navigable the year round from Rome to Gadsden; will be open to navigation to the Georgia Pacific Railroad by 1st of October, 1887; this gives us outlet to the E. T. Va. & Ga. R. R. system at Rome, and Richmond & Danville at Riverside, enabling us at all times to practically bring these two great systems in competition with Cincinnati Southern and Rome and Decatur Roads. We now have 4,000 population, a fine system of water works, electric lights, good schools, churches, opera house, large blast charcoal furnace turning out 30 tons of best car wheel iron every 24 hours. We have fine agricultural country and the finest climate in this latitude, the city being 700 feet above the level of the sea; unsurpassed scenery surround the city, mountains filled with iron and coal towering up all around us, giving us perfect protection against cyclones and hurricanes that desolate other localities."

A large coke furnace is under construction; another charcoal furnace is to be put up and mineral paint works have just been built.

Our Quarterly Review.

Some of our subscribers seem to have made a mistake in reading our quarterly review, as we have had a few complaints to the effect that the names of enterprises started in the early part of the year did not appear in this list. We distinctly called attention to the fact that, while the statistics as to the number of new enterprises and the capital invested covered the first six months of the year, the list of names of new industries was for three months only, as our quarterly report of April 2 gave the names of all new enterprises organized during January, February and March, and we saw no necessity for repeating them. Had the list of names included all for six months it would, of course, have been very much longer than it was. Birmingham, for instance, instead of being credited with 39 new enterprises and enlargements of old ones, would have had 77. Chattanooga, instead of 30, would have had 51. In fact, the great enterprises which started the booms in most of the Alabama towns were organized during the first 3 months of the year. It was then that Anniston organized her enterprises for building two 150 ton coke furnaces, iron pipe works, steel bloomery, &c. Gadsden likewise planned then for her two new furnaces, electric light works, ice factory and gas works. Tuscaloosa also organized her companies for building a furnace, developing coal and iron lands, &c. Decatur, which prior to January 1, had been a comparatively dead town, organized many new enterprises during January, February and March; while at Florence also a number of important companies were incorporated in the first three months of the year. These are simply samples. We tried to make it plain that this list of names was for three months and not for six months, and if any who failed to find the names of companies that they expected will turn to our issue of April 2, they will doubtless see them there.

The Kriebel Steam Engine.

The accompanying illustrations show the Kriebel steam engine, manufactured by the Rice & Whitacre Manufacturing Co., 42 and 44 West Monroe street, Chicago, Ill. These

take steam from the port X and exhaust through the ports Q and Qr as above, or else take steam from Q and Qr and exhaust through X, and thus reverse the engine.

The piston rod has a long stuffing box, N. The upper ends of the tubes, R and Rr, are

in the sectional cut. The governor, valve, cylinder, and piston-rod are all perfectly oiled by a lubricator placed in the steam pipe. These engines are all tested by steam, and perfectly adjusted before leaving the factory.

The workmanship and all material used are guaranteed to be first-class, and every engine to give full power and to work satisfactorily with ordinary care.

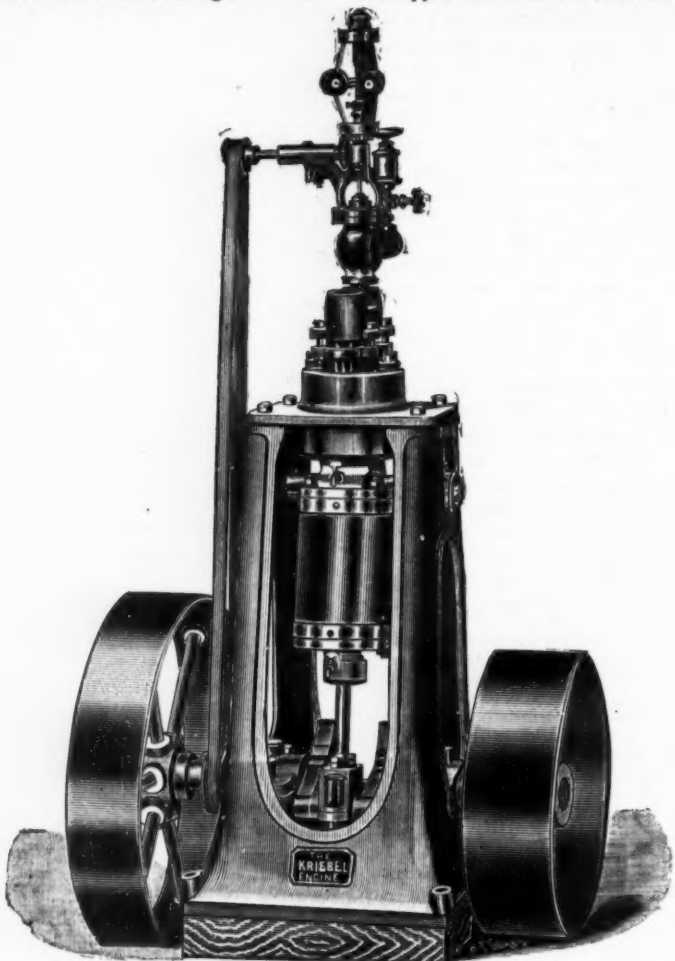
On account of the perfect construction and extreme simplicity of these engines, an inexperienced person can easily learn to operate them. The only part that requires repacking, and that not frequently, is the brass-stuffing box for the piston-rod, for which a suitable wrench is provided. The surfaces of the valve and cylinder which come in contact with each other are made perfectly smooth, forming an absolutely steam-tight joint.

The framework of the engine is cast in one piece, and is well proportioned and strongly made, so the working parts cannot get out of line. The cylinder trunnions and steel-crank shaft are held in position by strong boxes lined with the best Babbitt metal. The piston-rod is made of steel. The adjustable crank box is made of the best brass, and is mortised in and bolted to an iron body or box, into which the end of the piston-rod is screwed and firmly fastened by a steel pin. The cylinder is bored out perfectly true and the piston carefully fitted in. The piston has three rings, supported by springs, and can be readily expanded. The cylinder is encased by a Russia iron jacket bound by brass bands, and the space between the cylinder and jacket is filled with asbestos lagging.

The balance wheel of the engine, as well as the band wheel, is turned up and finished so it can be belted to. In all sizes the balance and band wheels are provided with set-screws, and in the larger sizes they are also key-seated to the shaft.

The boiler in this outfit rests on a heavy

boiler. The boiler is made of the best C. H. No. 1 iron, with flange-iron or steel fire-box and heads and lap-welded wrought-iron flues. All sizes are built with a water-leg around the fire. Suitable hand holes for cleaning out sediment are provided. The smoke-bonnet is of cast-iron in the small sizes and sheet-iron in the larger sizes. The



THE KRIEBEL STEAM ENGINE.

engines differ from engines of the slide valve pattern in having a moving or vibrating cylinder and stationary valve instead of a stationary cylinder and moving valve. By this arrangement of parts the eccentric valve rod, cross-head and connecting rod found on slide-valve engines are entirely dispensed with, the construction of the engines greatly simplified and the friction reduced to a minimum.

The sectional cut, outside view and the following description give a clear idea of the construction and manner of working:

The engine frame OO is made in one piece and has boxes on each side to receive the crank shaft M and the solid trunnions E, which project at right angles from the upper head of the cylinder and on which the cylinder is supported and pivoted. The piston H is connected by the piston rod I to the crank pin L, and the three are always in a straight line, consequently as the piston moves up and down the cylinder vibrates back and forth on the trunnions.

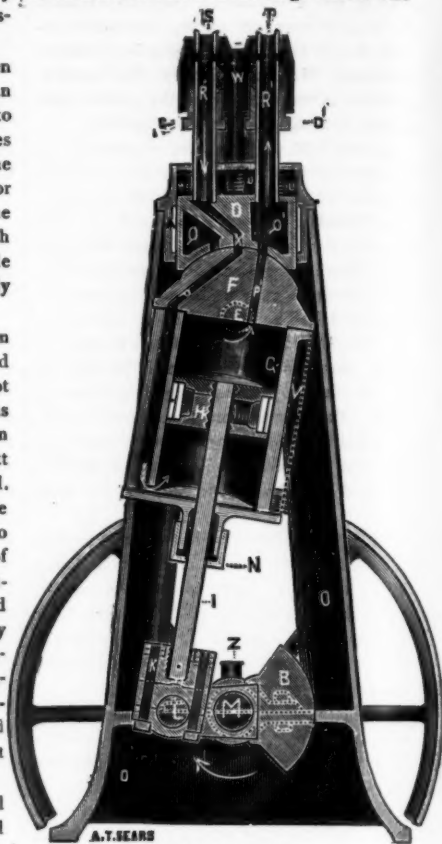
The valve D is a hollow, cylindrical casting enclosed in a casing, A, attached to the engine frame. The bottom of the valve has a smooth concave surface, while the upper end of the cylinder, F, has a smooth convex surface. The two surfaces make a perfect joint, and any wear that occurs is automatically taken up by springs, U, coiled around bosses above the valve.

The steam and exhaust pipes, S and T, connect with two brass tubes, R and Rr, which are screwed into the valve and communicate with the valve ports, X and Qqr. There are two cylinder ports, P and Pr, which open into the top and bottom of the cylinder. As the cylinder vibrates back and forth on the trunnions the cylinder ports alternately take steam from the central valve port, X, and exhaust through the ports Q and Qr. In their marine or reversing engines the direction of the steam in the tubes can be changed so the cylinder ports will either

received by fixed stuffing boxes, C. B represents a counter-balance, which is bolted to the cranks of engines with 5x6 inch cylinder and upwards.

The speed of these stationary engines is controlled by a governor which is not shown

cast-iron base, having an extension on which the engine is bolted. As the engine is connected with the boiler only by the steam and exhaust pipes, it is not affected by the boiler heat, as it would be if it were bolted or attached to the side or top of the



SECTIONAL VIEW.

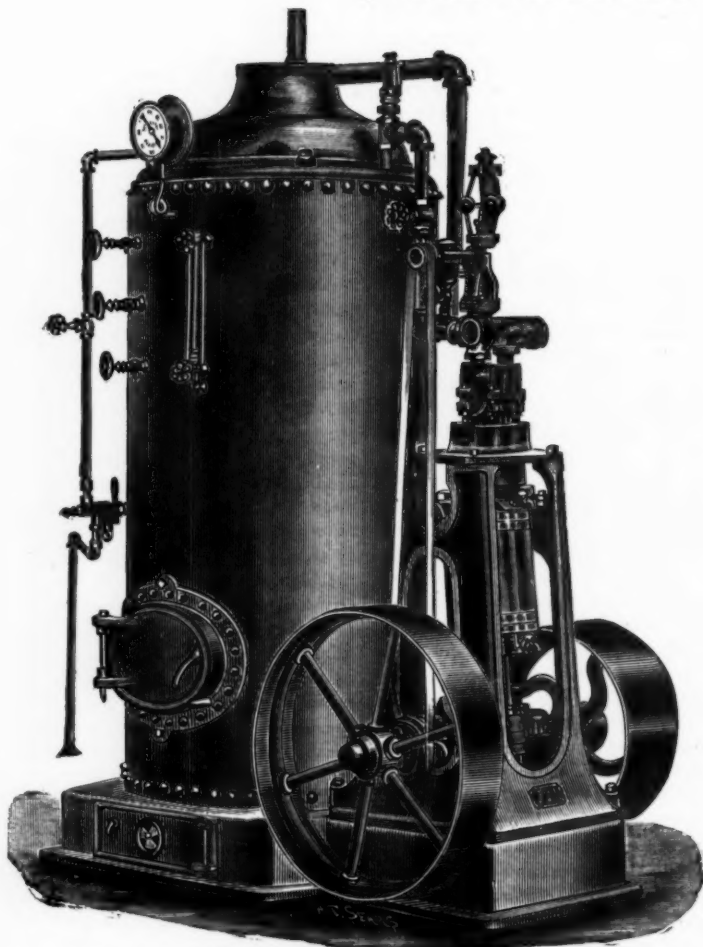
heating surface is figured at 12 square feet to the horse-power, or more.

This company are prepared to furnish outfits with engines and boilers of the same horse-power, or with boilers of greater horse-power than the engines where extra steam is required for heating or other purposes.

Blount Springs, Alabama.

Once upon a time, when planters were princes, Blount Springs was sought by seekers of health and pleasure from every principality in King Cottons' vast and rich domain. But of late years the place has been permitted to drift toward the lonesome limits of "innocuous desuetude." However, the day of its redemption is at hand, for the same men who made the great Sloss furnace a beacon light to Birmingham, are about to rescue Blount Springs from impending oblivion, and convert it into the most magnificently appointed watering place in all America. And the wonder is not that so magical a transformation is about to transpire, but that so magical a combination of healing waters, in so matchless a location, should have remained half improved a single season, much more these score of years.

There are thousands of people all over the South that think of Blount Springs only with gratitude and name its waters only to praise them. *** There is nowhere on this continent such a topography for fresh air as at these springs, which gush from the little end of a vast air-funnel whose bulge is made by mighty mountains, free from every vestige of contamination. And so it happens that a breeze prevails every day and every hour in all the livelong summer. No matter how sultry it may be elsewhere, this breeze blows fresh and cool here at Blount Springs. *** These twelve springs are all situated within a radius of less than a dozen rods, and chemical analysis, backed up by the testimony of thousands who have been cured by them, bountifully demonstrates the fact that by their use the great majority of human ailments may be absolutely and entirely eradicated. Have you got a bad liver? Go to Blount Springs. Are your kidneys out of fix? Go to Blount Springs. Have you got the rheumatism? These waters have cured hundreds of rheumatics that came back from Hot Springs, Ark., worse off than when they went there.—Thos. P. Grasty in Arkansas Traveller.



THE KRIEBEL ENGINE AND BOILER.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

ALABAMA.

Anniston.—B. J. Fry will erect a three-story building on Noble street.

Auburn.—The Auburn Agricultural & Mechanical College will purchase \$5,000 of new machinery for their mechanic art laboratory.

Bessemer.—The Bessemer Land & Improvement Co. have decided to build the water works, previously reported, at once.

Birmingham.—E. Lafferty, of Detroit, Mich., will establish large brick works.

Birmingham.—Peyton G. King, W. J. Vann, J. M. Carter and W. A. Cook, of Birmingham, and John Y. Tramwell and R. T. Armstrong, of Notasulga, have incorporated the Alabama Granite Co., capital stock \$200,000.

Birmingham.—The United Gas Improvement Co., of Philadelphia, Pa., have commenced work on their contract to build the large gas works for the Birmingham Natural Gas & Fuel Co., previously reported.

Birmingham.—E. B. Comly, president Motherwell Iron & Steel Co., of Logan, O., is investigating the merits of several Southern cities with a view, it is said, to establishing a manufacturing plant.

Birmingham.—The Elyton Land Co. are negotiating for the establishment of a pin and tack factory.

Calera.—The Calera Land Co. are negotiating for the establishment of a rolling mill and an iron furnace.

Cooke Springs.—Cooke Bros. will build a hotel.

Cooke Springs.—A stone quarry has been opened by Jewel & Watts, of Anniston.

Covington County.—E. E. Jackson & Co., of Salisbury and Baltimore, Md., have purchased 80,000 acres of timber lands in Covington county.

Daphene.—Bids for building a courthouse and jail will be received until July 25 by J. W. Stewart.

Florence.—The W. B. Wood Furnace Co. have rejected all bids for building their iron furnace, and will construct it themselves.

Huntsville.—The name of the company lately reported as receiving permit to erect an electric light plant is the Huntsville Light Co. Robert E. Cox is president. Will shortly erect a plant.

Kirkland.—The Union Lumber Co. will rebuild their lumber mill.

Linwood.—It is rumored that a company will be formed to build an iron furnace. If true, L. S. Schwarz can give particulars.

Mobile.—S. T. Weal, of Chicago, Ill.; H. G. Smith, of Milwaukee, Wis.; Morris J. Marx, of Mobile, and others have formed a \$250,000 land company.

Montgomery.—The Van Depoele Electric Manufacturing Co., of Chicago, Ill., have decided to establish the branch factory previously reported. About 150 men will be employed.

Montgomery.—Col. Shingleur, of Columbus, Ga., is thinking of starting a cotton factory.

Montrose.—A saw mill is being erected near Montrose by Mr. Kohn.

Nixonville.—It is stated that Messrs. Wooten and Talbot will start a starch factory.

Opelika.—L. F. Dixon and R. G. Williams will erect a two-story building, 50x100 feet.

Oxford.—Negotiations are being made with Georgia parties for the erection of a 20-ton fertilizer factory.

Selma.—The Highland Improvement Co., capital stock \$50,000, has been organized with J. W. Moore as president.

Selma.—C. G. Long has received the contract to erect the warehouse and refrigerator, previously reported, for Armour & Co., of Chicago, Ill.

Sheffield.—It is reported that the Standard Charcoal Iron & Chemical Co., of Nashville, Tenn., will erect a charcoal furnace and chemical plant.

Talladega.—The Home Land & Improvement Co. will build 60 cottages.

Talladega.—The Talladega & Coosa Valley Railroad Co. will extend their railroad from a point two miles from Talladega to Talladega.

Tuskaloosa.—Mattox & Co., of Atlanta, Ga., have purchased timber lands and will erect a saw mill.

Tuskaloosa.—Messrs. Jordan, Lupton and associates, of Dallas, Texas, will erect brick and tile works at once.

Tuskaloosa.—Dallas (Texas) parties are prospecting for a site for a furniture factory. The Tuskaloosa Coal, Iron & Land Co. can give information.

Tuskaloosa.—The Tuskaloosa Northern Railroad Co. are receiving bids for building the first section of their railroad.

Verbena.—A. J. Brooks is erecting a grist mill and gin; also a linter and cotton seed crusher.

ARKANSAS.

Bear.—George Lawrence and Mr. Smith are developing mines.

Fordyce.—E. E. Mason and others, of St. Louis, are erecting the saw mill referred to last week.

Hot Springs.—James D. Houston is president; O. F. Smith, vice-president and treasurer, and Charles Cutter, secretary, of the Rich Mountain Mining Co., lately reported as being organized.

Hot Springs.—The Harmony Mining Co. are developing mines near Hot Springs.

Hot Springs.—The Luminary Gold & Silver Mining Co. has recently been organized by R. S. Strobhart, J. J. Sumpter, J. D. Kimball, Frank Carl, P. E. Greene and others.

Little Rock.—William Kerrigan and J. H. McCarthy have received the contract to build the branch of the St. Louis, Arkansas & Texas Railroad from Althemier to Little Rock, and the branch from Louisville to Shreveport, La.

FLORIDA.

Bonifay.—The Bonifay Brick Co. are enlarging their works.

Bronson.—Messrs. Howard and Olmstead are purchasing about 13,000 acres of timber lands with a view to developing. They will build mills.

Center Hill.—J. G. Lamareaux, lately reported as to build a saw mill, will add a shingle mill and a planing mill.

Daytona.—E. E. Vaile, of St. Augustine, contemplates building a fine hotel.

Fernandina.—David Whitney, of Detroit, Mich., and others, have purchased 33,000 acres of timber lands. They will build a mill in Levy county.

Fernandina.—The Baptists will build a new church.

Kissimmee.—The Florida Sugar Manufacturing Co., capital stock \$300,000, has been organized, with Hamilton Disston, of Philadelphia, Pa., as president; Charles E. Etting, 327 Walnut street, Philadelphia, secretary and treasurer, and R. E. Rose, general manager. The company succeeds the St. Cloud Agricultural & Improvement Co., and will erect the sugar refinery reported last week.

Palatka.—John A. Prentice has the contract to build 75 miles of the Alabama, Florida & Atlantic Railroad, and will begin work within 90 days.

Sanford.—The Sanford Water Co. will put in new pumping machinery and boilers, and lay new and larger mains, in addition to building the new reservoir, previously reported. The cost of improvements will be about \$75,000.

St. Augustine.—William McColter has received the contract to rebuild the old cathedral. The cost will be about \$40,000.

GEORGIA.

Albany.—The Albany Oil Co. will overhaul their works and add new and improved machinery.

Atlanta.—The Piedmont Exposition Co. will erect a machinery and agricultural building at a cost of \$11,000.

Atlanta.—D. A. Beatie, chairman building committee, will receive proposals until July 16 for erecting a school building.

Atlanta.—Maddox, Rucker & Co. have secured a controlling interest in the Southern Phosphate Works and will spend about \$25,000 in enlarging and improving them.

Athens.—James M. Smith contemplates putting additional machinery in his guano factory.

Athens.—R. L. Bloomfield, F. W. Cheney, James Camak, J. H. Rucker, A. L. Hull and others have incorporated the Bloomfield Water Power Co., capital stock \$300,000. The company will either build a cotton factory at Barnett Shoals, or erect buildings to be leased out for manufacturing purposes.

Augusta.—Vannerson & Co. will build a storage warehouse, 35x160 feet.

Augusta.—The Knights of Labor will build a knitting mill and are negotiating for a water-power site.

Augusta.—The Georgia Railroad & Banking Co. will erect a two-story building, the lower story to be used for a machine shop, and the upper floor for manufacturing car windows, blinds, &c.

Augusta.—Eugene T. Verdery and others will form a company to erect a bagging factory.

Brunswick.—A planing mill will be erected by William Anderson.

Brunswick.—The Georgia Sawdust Chemical Co. has been incorporated to manufacture oils, turpentine, &c., from sawdust.

Canton.—J. O. Robertson has secured the Micou gold mine, about four miles from Canton, and will develop it.

Griffin.—W. C. Aycock will build a sash, door and blind factory. Work will be commenced about September 1.

Griffin.—Jeter & Boardman, of Brunswick, contemplate building gas and water works.

Jasper.—The Southern Marble Co. contemplates building a railroad from Jasper to their marble quarries.

Lumber City.—There is talk of a guano factory being erected.

Macon.—The county commissioners want to correspond with parties who drill artesian wells.

Macon.—C. C. Stratton & Co. have lately added some new machinery to their brick works to increase their capacity.

Macon.—S. A. Torrence wants to purchase machinery for manufacturing excelsior.

Milledgeville.—It is reported that an ice factory will be erected.

Millen.—Parker Bros. have rebuilt their turpentine distillery, lately reported as burned.

Monticello.—N. B. White & Co. are preparing to erect a two-story building, 40x120 feet.

Ophir.—It is reported that the Franklin & McDonald Mining Co. will erect a cotton factory, also buildings for other manufacturing purposes.

Rome.—A bill will be introduced in the legislature at Atlanta to incorporate the Printup City Land & Improvement Co.

Rome.—The hotel reported last week as to be built will cost about \$100,000. The Rome Land Co. can give information.

Thomasville.—Jeter & Boardman, of Brunswick, contemplate building water works.

Vienna.—The contract to build a new jail has been let to T. B. Artope, of Macon, at \$5,025.

Washington.—A bill will be introduced in the legislature at Atlanta to incorporate the Anthony Shoals Land Improvement Co., to develop mineral lands, quarries, &c., and build railroads, pipe lines, &c.

Waycross.—Gillon & Burnet, of Macon, have purchased a site to erect an iron foundry.

Wrightsville.—A hotel will be built by L. Davis & Bro.

KENTUCKY.

Hopkinsville.—Fred. E. Blumenstiel, W. H. Lee and R. F. West have formed the Blumenstiel Carriage Co., to manufacture carriages.

Louisville.—It is reported that Sawyer, Wallace & Co. and Brannin, Brand & Glover will rebuild their tobacco warehouses, lately burned.

Louisville.—Ferguson & Hamilton will erect a three story brick warehouse to cost from \$10,000 to \$15,000.

Louisville.—Edward Bull and Robert T. Bull have chartered the E. Bull Medicine Co., capital stock \$5,000, to manufacture medicines.

Maysville.—H. C. Barckley, Asa R. Burgess and others have incorporated the Ohio River, Concord & Tollesboro Turnpike Road Co., capital stock \$10,000.

Newport.—A company has been formed to erect an electric light plant.

Owensboro.—A soap factory will probably be started. John Thixton can give particulars.

Paris.—A proposition has been made by Mr. Davenport, of Charleston, W. Va., to build water works to cost \$100,000.

Russellville.—C. H. Ryan has received the contract to build the Central City & Sacramento Railroad.

Williamsburg.—A stock company been formed to build a furniture factory. G. A. Denham is secretary.

LOUISIANA.

Shreveport.—Efforts are being made to organize a company to build a cotton and woolen mill.

Thibodaux.—The capital stock of the company lately reported as to be chartered to start a canning factory will be \$25,000. J. A. Badeaux can give information.

MARYLAND.

Baltimore.—James H. McAfee has received the contract to erect a school building on South Caroline street. It will cost \$16,743.

Baltimore.—The contract to build an addition to the school corner Gilmore and Presman streets has been let to Lewis C. McCusker at \$5,372.

Easton.—The Talbot County Paper Mill Co. will rebuild their straw board mill reported last week as burned. The loss is \$35,000.

Joppa.—A canning factory has been built by J. B. Hanway.

Lonaconing.—Davis Bros. will, it is said, build 300 coke ovens.

MISSISSIPPI.

Greenville.—Deaton & Skinner are building a steam ginnery and grist mill.

Natchez.—Mr. Owens will establish a patent medicine factory.

Tupelo.—C. H. Clifton is organizing a company to build a hotel.

Yazoo.—The Yazoo Warehouse Co., capital stock \$15,000, has been organized to build a warehouse, with J. F. Powell as president.

Yazoo City.—I. N. Gilruth will build a warehouse.

NORTH CAROLINA.

Asheville.—A. Garrett will build a large hotel.

Asheville.—J. M. Tiernan, P. O. box 326, will receive bids for erecting a school building until July 15.

Cedar Falls.—The Cedar Falls Manufacturing Co. have bought sprinkling machinery for their cotton mills. They contemplate doubling their capacity.

Henderson.—A four-story tobacco stemmery, 40x180 feet, will be erected by Allen & Ginter, of Richmond, Va.

Henderson.—Clary Bros., previously reported as to build a prize factory, have commenced work. It will be four stories, 46x110 feet.

High Point.—A. M. Ellison is trying to organize a stock company to erect a furniture factory.

Mount Holly.—S. S. Bonney will erect the machiae shop reported last week.

Randleman.—Some additional machinery will be added to the cotton factory of the Naomi Falls Manufacturing Co.

Randleman.—The Randleman Manufacturing Co. will put some additional machinery in their cotton mill. Machinery for electric lighting will also be put in.

Roxborough.—C. N. Brown has received the contract for the brick work of a new jail.

Vineland.—J. J. Frazier has purchased machinery to rebuild his saw mill, reported last week as burned.

Waynesville.—A. A. Howell and George W. Williams will be interested in the furniture factory reported last week.

Whittier.—J. C. Brown & Co. contemplate adding spoke and handle machinery to their saw mill. Correspondence with manufacturers is desired.

SOUTH CAROLINA.

Columbia.—M. L. Champion has received the contract to erect an office building for John T. Sloan, Jr.

Columbia.—The name of the company previously reported as being formed to build a cotton factory is the Columbia Mills. The capital stock is \$300,000. George K. Wright, W. A. Clark, R. W. Shand, D. Gambrill and George A. Shields are interested.

Greenville.—W. A. Wright, representing the Brush Electric Light Co., is negotiating for the erection of an electric light plant,

Greenville.—A land and improvement company will probably be organized. T. Q. Donaldson can give information.

Greenwood.—A cotton factory is projected. W. H. Pearce and others are receiving subscriptions.

Panacea Springs.—A large hotel is reported to be erected.

Spartanburg.—Moffet, Hodgkins & Clarke, of Watertown, N. Y., have contracted to build water works.

Williamston.—A flour mill is being erected by Thomas Crymes.

TENNESSEE.

Bristol.—The Sparger Steel Compound Co. has been organized with W. A. Sparger as president; H. H. Haynes, secretary, and E. W. King, treasurer. The capital stock is \$100,000.

Chattanooga.—The Hamilton Lumber Manufacturing Co. are establishing a sash, door and blind factory.

Chattanooga.—P. Lazard will erect a \$12,000 brick building.

Chattanooga.—Mr. Van Anderson has started a brick yard.

Chattanooga.—It is rumored that C. E. Long, of Pennsylvania, contemplates building large glass works.

Chattanooga.—J. T. Cahill, F. H. Caldwell, Frank Whiteside, J. J. Mahoney and Garnett Andrews have chartered the Cahill Iron Works, to enlarge and operate the iron works of J. T. Cahill.

Erin.—W. R. Cooley, N. O. Thomas and W. R. Reynolds have bought the cement rock quarry of W. E. Cooley, and will put in machinery to develop it.

Johnson City.—J. C. Blevins & Co. will develop the Foust mine. They contemplate developing several other mines.

Memphis.—R. H. Temple, chief engineer Tennessee Midland Railroad Co., will receive proposals until July 25 for building about 135 miles of railroad.

TEXAS.

Austin.—The Austin Water, Light & Power Co., reported last week, is a consolidation of the City Water Co. and the Austin Electric Light Co. The company will add to their present plant an incandescent plant of 3,900 lights capacity.

Belcher.—A brick yard has lately been started.

Belton.—Machinery has been purchased for a roller flour mill.

Bonham.—The American Well Works, of Aurora, Ill., have the contract to sink an artesian well for the Texas & Pacific Railroad Co.

Corpus Christi.—John Willett and associates are building a harbor at Padre Island, about 25 miles from Corpus Christi. They propose to build warehouses, docks, &c.

Dallas.—The Oak Cliff Water Supply Co. has been chartered by T. L. Marsalis, Thomas Field, John F. Elliott, Frank Field and W. J. Betterton. The capital stock is \$50,000.

Dallas.—J. C. O'Connor, Royal A. Ferris, Sanger Bros., Adoue & Lobit and others will incorporate the Dallas Terminal Railroad Co.

Dallas.—The contract for the iron work of the roof of the new postoffice and courthouse has been received by the Marshall Foundry & Construction Co., of Pittsburg, Pa., at \$7,025.60.

Denison.—The Missouri Pacific Railroad Co., (office, St. Louis, Mo.), are enlarging their machine shops, building a round house, &c.

El Paso.—The Texas & Pacific Railroad Co., (Office, Dallas,) contemplate building a union depot and a bridge across the Rio Grande River.

Fort Worth.—The factory of the Fort Worth Manufacturing Co. is to be enlarged,

Fort Worth.—The name of the \$250,000 land company, reported last week, is the Pontiac Land & Manufacturing Co. The incorporators are J. P. Harger, J. J. Green, A. H. Heath, L. O. Smith, W. S. Essex and others.

Fort Worth.—It is reported that the Gulf, Colorado & Santa Fe Railroad Co., (office, Galveston,) will build a railroad from Farmersville, in a southwesterly direction, to Fort Worth.

Henrietta.—The city council will receive proposals until July 20 for sinking an artesian well. It is not to be over 1,500 feet deep.

Henrietta.—John F. Conn will receive proposals for sinking an artesian well until July 20.

Honey Grove.—The Honey Grove Mill & Elevator Co. will, it is said, put in electric-light machinery.

Marshall.—The Marshall Opera House Co. have let the contract for the brick work of their new opera house, previously reported, to James Higgins and the contract for the wood work to John Tracey.

Palestine.—The Palestine Mining & Petroleum Co. has been chartered by George A. Wright, H. C. Swanson, T. T. Gamme, G. W. Burnett and others. The company will soon purchase machinery and begin developing.

Palestine.—Benjamin S. Wettermark, of Nacogdoches, is leasing oil lands with a view to developing.

Palestine.—W. H. Gaston, of Dallas, has purchased iron ore lands.

San Antonio.—L. M. Gregory, F. M. Roberts and John Sharen have incorporated the Homestead Land & Improvement Co., capital stock \$50,000, and the San Antonio Land & Improvement Co., capital stock \$100,000.

San Antonio.—It is reported that the Lone Star Refrigerator Co. will be formed to build a refrigerator. The San Antonio Ice Co. can give information.

San Antonio.—The West End Town Co., capital stock \$20,000, has been chartered by George W. Russ, V. W. Anderson and others.

San Saba.—N. D. Lidstone and others have purchased 7,500 acres of iron ore lands. Will probably develop.

Waco.—George Putnam and Fred Putnam are prospecting for oil and natural gas.

Weatherford.—The city council contemplates building water works.

VIRGINIA.

Alexandria.—The New South Mining & Improvement Co., previously reported as incorporated, has been organized with Thomas L. Rosser as president and general manager; John T. Wilder, of Roan Mountain, Tenn., vice-president; and William G. McIntyre, of Springfield, secretary and treasurer.

Balcony.—It is rumored that a large hotel will be built.

Bealton.—Kingsley Bros., of Hamilton, are building a creamery.

Claremont.—O. M. Brock, representing the Monroton Manufacturing Co., of Pennsylvania, is prospecting for a site for a toy factory.

Clarksville.—William E. Blanks and Edward C. Goode will start a smoking tobacco factory.

Gilmore Mills.—W. H. Chiles has purchased new machinery for his flour mill.

Manchester.—The Winterpock Mining & Trading Co. has been organized to mine coal at Winterpock. Ellis Martin is president; H. C. Cox, vice-president, and C. T. Henley, secretary and treasurer. The capital stock is to be not less than \$5,000 nor more than \$100,000.

Pocohontas.—Water works are being agitated.

Portsmouth.—The Atlantic & Danville Railroad Co. have purchased 13 acres of land for machine shops, &c.

Tazewell C. H.—The Kent's Ridge Coal & Iron Co., previously reported, will shortly be organized.

WEST VIRGINIA.

Bramwell.—H. M. Sill, William C. Watt, S. W. Cotton, Jr., J. S. Clark and A. C. Denniston, of Philadelphia, Pa., have incorporated the South Elkhorn Coal Co., to mine coal and manufacture iron, steel, &c. The capital stock is limited to \$500,000.

Clarksburg.—David A. Driscoll, of Washington, D. C., has made the lowest bid for erecting the building for the United States government, previously reported.

Ronceverte.—B. Hurthall contemplates developing his mineral lands.

St. Albans.—The St. Albans Boom Co., previously reported, have organized with P. H. McCracken as president; W. E. Chilton, vice-president, and G. O. Chilton, secretary and treasurer. Will soon commence work.

BURNED.

Paris Landing, Tenn.—The saw mill and stove factory of A. J. Weldon.

Washington, D. C.—The saw mill of William R. Turner.

To Build a Hotel and Dummy Railroad.

ROME, GA., June 27, 1887.

Editor Manufacturers' Record:

The citizens of Rome have organized to build a hotel to cost \$100,000. Would like to correspond with a finished architect with a view of obtaining specifications and estimates. The Rome Land Co. will build a dummy line three or four miles in length. Correspondence solicited. J. L. BASS.

Contemplate Enlarging.

SHERMAN, TEXAS, June 30, 1887.

Editor Manufacturers' Record:

We are contemplating putting in in connection with our present plant a system of incandescent lights. It will be a couple weeks, however, before the matter is definitely determined.

SHERMAN ELEC. LIGHT & POWER CO.

Will Start a Canning Factory.

THIBODAUX, LA., June 27, 1887.

Editor Manufacturers' Record:

A committee has been appointed to draft a charter for a stock company to establish a canning factory at this place. The capital stock is to be fixed at \$25,000, and the shares are to be ten dollars each.

T. A. BADEAUX.

Contemplate Building Gas and Water Works.

BRUNSWICK, GA., July 1, 1887.

Editor Manufacturers' Record:

We contemplate building water works at Thomasville, Ga., gas and water works at Americus, Ga., and gas and water works at Griffin, Ga.

JETER & BOARDMAN.

ATLANTA, GA., July 2, 1887.

Editor Manufacturers' Record:

Beside the main building, now in process of erection, the Piedmont Exposition Co. will construct immediately a machinery and agricultural building at a cost of \$11,000. The Gentlemen's Driving Park Co., who own the exposition, will erect a grand stand to seat 3,000 people; cost not yet estimated. Other small buildings will also be erected.

WM. N. SMYTH, Secy.

VERBENA, ALA., July 2, 1887.

Editor Manufacturers' Record:

I am building a grist mill and gin, also putting in in connection with same a linter and cotton-seed crusher. A. J. BROOKS.

New Gas Company to Build Works.

MACON, GA., June 30, 1887.

Editor Manufacturers' Record:

The gas company is waiting for a charter. The capital is \$125,000. Merchants' National Bank starts business July 1st; capital paid up \$100,000. C. C. Stratton & Co., brick manufacturers, have put in two more machines, increasing their product to 125,000 per day. Toole & Ernest opened a brick yard; capacity 40,000 per day. J. G. Ruan has opened a new brick yard; capacity 30,000 per day. This gives us eight brick yards, with capacity of 500,000 brick daily, with a ready market. Central Railroad & Banking Co. are building a cotton compress to cost \$75,000.

T. J. CARLING.

COOKE SPRINGS, ALA., July 2, 1887.

Editor Manufacturers' Record:

We are going to build a hotel at this place. We will accommodate 200 guests. There has been a fine stone quarry opened here by Jewel & Watts, of Anniston.

COOKE BROS.

Building a Creamery.

HAMILTON, VA., July 4, 1887.

Editor Manufacturers' Record:

We are building a creamery at Bealton, with a capacity of 2,000 pounds of butter a day. It will be opened by the first of August.

KINGSLEY BROS.

Erecting Roller Flour Mill.

WICHITA FALLS, TEX., July 1, 1887.

Editor Manufacturers' Record:

A roller flouring mill of 75 barrels capacity is now being built by a Mr. Shallad.

J. A. KEMP.

Building Planing Mill.

FLORENCE, ALA., July 2, 1887.

Editor Manufacturers' Record:

We are building a planing mill. There is another party building a cotton compress. A number of other industrial enterprises are to be established here soon.

J. W. NICHOLS & Co.

Timber Lands to be Developed.

FERNANDINA, FLA., July 2, 1887.

Editor Manufacturers' Record:

Thirty-three thousand acres of land have been sold to David Whitney, of Detroit, Mich. Think he and his parties are fully equipped with mill machinery, &c. They propose to operate largely in getting out and shipping cypress lumber. Mill will be located in Levy county. Other large sales are now being consummated with Western lumber dealers.

WILLIAMS & SWANN.

Enlarging Electric Light Plant.

AUSTIN, TEX., July 1, 1887.

Editor Manufacturers' Record:

The City Water Co. and the Austin Electric Light Co. have consolidated, and are now known as the Austin Water, Light & Power Co. We have contracted for and will place at once three Westinghouse machines of 1,300 lamps each and four 80 horse-power boilers. The above is in addition to our present plant, consisting of 110 Brush 2,000 candle-power lamps.

D. L. WICKES, Secy.

FORDYCE, ARK., June 30, 1887.

Editor Manufacturers' Record:

A large lumber mill is being put up here by parties from St. Louis. E. E. Mason is principal.

G. W. SMITH.

WILLIAMSTON, S. C., June 29, 1887.

Editor Manufacturers' Record:

Mr. Thos. Crymes is building a merchant mill.

E. B. DONNALD.

Building Railroads.

NASHVILLE, TENN., June 30, 1887.

Editor Manufacturers' Record:

Our contract for the Dunlap extension extends from the Thomas mines in Sequachee Valley to Dunlap, 18 miles, and is a continuation of work already completed by us from Victoria to Thomas mines, 4 miles, since February 1. We have also recently completed a mile of heavy work at the junction of Tracy City Branch at Cowan, Tenn., whereby a "switch back" is avoided. We have also in progress the construction of seven miles of heavy mountain work extending the Sparta Branch from Sparta, Tenn., to the Bon Air coal fields at the top of Cumberland mountain. This work was commenced February 1st, and will be completed in October. All the above work, amounting to about 30 miles, is under contracts awarded us by the Nashville, Chattanooga & St. Louis Railway Co.

FOSTER, CREIGHTON & Co.

Electric Light Plants.

HUNTSVILLE, ALA., June 29, 1887.

Editor Manufacturers' Record:

The Huntsville Electric Light Co. have machinery up and will begin their lights in a few days. A second company, Huntsville Light Co., have obtained right of way and will begin the erection of plant very soon. The president is Robt. E. Cox, of this city.

ED. I. MASTIN.

Machinery Wanted.

WHITTIER, N. C., June 29, 1887.

Editor Manufacturers' Record:

We contemplate adding spoke and handle machinery to our saw mill at this place and desire manufacturers of such machinery to correspond with us.

J. C. BROWN & Co.

CEDARTOWN, GA., June 28, 1887.

Editor Manufacturers' Record:

On the 16th instant the plant of the Coosa Coal & Coke Co., at Rayland, Ala., was sold under execution and was purchased by the Cherokee Iron Co.

A. G. WEST.

WASHINGTON, GA., June 27, 1887.

Editor Manufacturers' Record:

The mayor and councilmen passed a resolution that a tower of brick or iron 65 to 75 feet high be erected, on which would be placed a tank of about 70 or 75,000 gallons capacity. Bids for its erection have been invited.

JAS. A. BENSON.

ATLANTA, GA., June 29, 1887.

Editor Manufacturers' Record:

Union Hall, a large wooden building connected with Spelman Seminary, was, with its contents, totally destroyed by fire on the afternoon of June 24. Loss from \$10,000 to \$12,000. Insurance between \$4,000 and \$5,000. During the summer it will be rebuilt of brick.

SIDNEY ROOT.

Will Reopen Mines.

NEW YORK, N. Y., June 30, 1887.

Editor Manufacturers' Record:

About three weeks ago the Hoene Warrior & Jefferson Coal Co., of Alabama, purchased about 2,000 acres of mineral lands and mines known as the Brake mines, and we are pushing to reopen same.

IGNATIUS POLLAK, Pres.

Enlarging Machine Shops.

DENISON, TEXAS, July 2, 1887.

Editor Manufacturers' Record:

The Missouri Pacific Co's shops are being enlarged to accommodate 300 additional laborers, machinists, &c., and a roundhouse with stalls for 91 engines is also being built, and the switching capacity of the yards are being quadrupled.

SAML. HANNA.

Bristol News Notes.

BRISTOL, TENN., July 2, 1887.

Editor Manufacturers' Record:

The Norfolk & Western Railroad Co. have built an excellent track to the lands of Bristol Land Improvement Co., and agree to extend same as rapidly as business is secured.

Buffum & Co. have completed their factory and are receiving from five to twenty-five car-loads of choice lumber daily.

The Holston Packing Co. have purchased of the Bristol Land Improvement Co. a lot and are receiving lumber daily for a large canning factory.

Mr. Kohn, of Birmingham, Ala., in connection with other friends, has invested in Bristol lands.

Reynolds Tobacco Factory is in full blast, working about 300 hands.

The Clinch River Veneer Co. are doing well, and congratulate themselves on making so fortunate a location.

Bristol has two tobacco warehouses and sells annually from two to three million pounds of bright leaf. This section only a few years ago was unknown as a tobacco-growing country.

JOHNSON CITY, TENN., June 28, 1887.

Editor Manufacturers' Record:

Can you give me the names of parties who make the formation of water work companies a specialty. I want a first-class company to take up the water works for this town. The estimated cost of works, all included, is \$60,000. I can get as income for first year over \$5,000. The water can be brought in by gravitation. There is enough 2½ miles off to supply a town of 50,000 people.

C. K. McCALLUM.

To Develop Mines.

JOHNSON CITY, TENN., June 25, 1887.

Editor Manufacturers' Record:

We will develop the Foust mine at an early day. We are now developing a mine near Johnson City. We find from analysis that there is 11 per cent. silver, 32 per cent. galena or lead, with a trace of zinc. We also have several other mines which we contemplate opening during the summer.

J. C. BLEVINS & Co.

To Build a Courthouse.

DEL RIO, TEXAS, July 2, 1887.

Editor Manufacturers' Record:

The county of Val Verde will build a courthouse to cost from \$25,000 to \$35,000. The house will be erected the coming fall.

W. K. JONES.

To Build a \$20,000 Church.

TYLER, TEXAS, July 2, 1887.

Editor Manufacturers' Record:

The Methodist church will be built this summer. It is to be of brick and will cost \$20,000. The Cumberland Presbyterian Church is now being built. It is of brick; cost \$10,000.

P. P.

ROXBORO, N. C., June 30, 1887.

Editor Manufacturers' Record:

Am building \$6,000 jail for Pierson county. Finished court house in 1885.

C. W. BROWN.

To Build a Furniture Factory.

WILLIAMSBURG, KY., July 2, 1887.

Editor Manufacturers' Record:

A company was this day formed that will issue stock to the amount of \$5,000 or \$10,000 for a furniture factory. They invite correspondence with some party who has \$5,000 or more to invest, who thoroughly understands the furniture manufacturing business, and will take charge of and run a first-class factory. Abundance of timber of all kinds. G. A. Denham is secretary.

G. STRANGE.

To Develop Timber Lands.

BRONSON, FLA., June 30, 1887.

Editor Manufacturers' Record:

Messrs. Howard & Olmstead are making a purchase of about 13,000 acres of timber land at this place, and will erect mills and be at work by winter. Other parties are negotiating for goodly tracts, and will develop their purchases during the coming winter.

J. V. BURKE.

Machinery Wanted.

MACON, GA., June 29, 1887.

Editor Manufacturers' Record:

I want the address of manufacturer of a machine for making excelsior. There are a number of them made I believe.

S. A. TORRENCE.

MILLEN, GA., June 23, 1887.

Editor Manufacturers' Record:

We are rebuilding turpentine still, and will be ready for operation by the 27th.

PARKER BROS.

Rebuilding Saw Mill.

VINELAND, N. C., June 30, 1887.

Editor Manufacturers' Record:

I have purchased a new and larger saw mill, which I will put down at once.

J. J. FRAZIER.

BALTIMORE, MD., July 1, 1887.

Editor Manufacturers' Record:

I have purchased Weyer's cave, as well as the Fountain cave adjoining, both valuable properties. They will be thrown together as one, which, when done, will far surpass the Luray cave. Robert Garrett, president Baltimore & Ohio Railroad, has an interest. We will build a hotel in connection with caves. The Valley Railroad will build a branch to the caves next season.

FRANK J. HARMISON.

HOT SPRINGS, ARK., June 29, 1887.

Editor Manufacturers' Record:

The Rich Mountain Mining Co. was organized here on 7th inst. It is capitalized at \$5,000,000 (200,000 shares), \$1,000,000 treasury stock. Have 11 claims in G-land and Montgomery counties. No works will be put up at present, but development work will be pushed along as rapidly as possible. The whole country is waiting for Moffit smelter that will start about July 15, to decide mining matters in this section.

O. F. SMITH, Vice-Pres. and Treas.

AUBURN, ALA., June 27, 1887.

Editor Manufacturers' Record:

Our college building with equipment, valued at \$125,000, was entirely destroyed by fire on the 24th. The college will open in other buildings on September 15. The main building will be rebuilt at once. Trustees meet to-morrow. Equipment will be purchased at once. Mechanic Art Laboratory with its fine machinery was all saved.

AGRICULTURAL & MECHANICAL COLLEGE,

W. L. BROWN, Pres.

DICKSON, TENN., June 27, 1887.

Editor Manufacturers' Record:

We have machinery bought for brick and tile mill, with a capacity of 30,000 per day; also for planing mill and furniture. I am negotiating for large foundry and machine shop; also roller mill and axe handle factory on the co-operative plan. Would like to have good, live, enterprising men come here from the North, as we are in the healthiest part of the South, and surrounded with iron furnaces and alcohol ovens, situated 40 miles west of Nashville on the N. C. & St. L. Railroad; also at the terminus of the N. & T. Railroad. They transfer 115 tons of pig iron daily from the Warner and Aetna furnace. DICKSON CO-OPERATIVE MFG. CO.

Steam Power versus Water Power.

MONROE, CATAWBA COUNTY, N. C.,
June 30, 1887.

Editor Manufacturers' Record:

I notice in the excitement about building cotton mills that there is quite a determination to locate in the towns or cities, and use steam power, which seems to me to be largely the result of town patriotism, so to speak. Whilst the promoters of a manufacturing enterprise may be, to a considerable extent, influenced by the desire to have their business near them and also more convenient to other avenues of trade than would be the case in the country, there is superadded to this the combined influence of the citizens of the town, reinforced by the local newspaper to locate there. Build up the town, they say, increase the permanent population, bring in more money, circulate more; all will feel its beneficial effects. In urging these things they state the truth, and all they say in regard to the advantages to be derived by the town will apply with greater force to the needs of the country where the water powers are.

So much for the benefit of town or country. Now let us consider the interests of the money investors. To build in the town steam power must generally be used, and the steam plant costs heavily and requires an engineer and fireman at high wages, and an immense expense for coal or wood, the latter at double prices or more. The trade of the town would get the cash paid out to the employees, whereas, in the country on the water powers a prosperous mercantile business may be established, and the most of wages paid in what the employers need more than they do cash. The heavy daily expense of engineer, fireman and fuel would be saved; town or city tax also, which is generally a considerable item. Rents are higher in the towns, and various kinds of necessities and the demand of other expenditures more pressing, and hence wages must be higher. I am sure that the additional expense just here will more than cover the expense of keeping a team or teams to go to and from the railroad station, a few or more miles away; and besides the town manufacturer has to keep a team or pay drayage to some one else. In addition to doing the hauling for the mills in the country, the teams can be employed on the factory, farm, or in hauling wood for the tenants.

In one of our North Carolina cities, a moneyed firm built a 6,000-spindle factory, and are doing well. Other moneyed men of the same place, in disregard of all the town influences and with a sharp eye to their interests, the immediate and most important purpose for which factories are supposed to be built, have purchased a water power and farm in the country, and are building a cotton mill of about the same size. Now, whilst seeking their own interest by building in the country, if they are not building up their town as much as they would to build at home, they are nevertheless benefiting their common country just as much, and, I believe, are doing themselves more good. The county needs improvement as much as the towns and cities, and more so; and, if capitalists of towns and cities can do better for themselves to build on the water powers, they ought to do so, and in doing so they are as great, if not greater, public benefactors than those who build in town. Which of the above referred to mills will make the most money when under full headway I do not know, but I believe the one in the country. I am free to confess that I am interested in water powers at other places, and if my position that the preponderating advantages are in favor of the country water power is wrong, I am willing to and desirous of knowing it.

C. L. TURNER.

ELIZABETH CITY, N. C., July 5, 1887.

Editor Manufacturers' Record:

I have put in a horse-power brick machine, made at Anderson, Ind., and I would say that it is the best soft mud machine I ever saw.

G. B. THOMPSON.

A Sugar Refinery for Florida.

KISSIMMEE, FLA., July 1, 1887.

Editor Manufacturers' Record:

The Florida Sugar Manufacturing Co. was organized June 19, and succeed the St. Cloud Agricultural & Improvement Co. The capital is \$300,000. Hamilton Diston is president, and Chas. E. Etting, secretary and treasurer. (Address 327 Walnut St., Philadelphia.) R. E. Rose, of Kissimmee, Fla., is general manager.

We have purchased a sugar plant costing \$70,000, to be delivered here during August; the freights and buildings will cost \$30,000, making total cost of mill \$100,000 complete. We expect to have it in operation by Nov. 1, 1887. It will be a central mill and the desire is to induce neighboring planters to raise sugar cane and sell to the mill at a scaling price depending upon price of sugar and density of juice on a basis of \$4.00 per ton for cane that will show a density of 10° "baume" with sugar selling at 6 cts. per lb. The price of cane to be increased or diminished with price of sugar. The company will contract for all cane up to 1,000 acres for season of 1888. Cane here averages 30 tons per acre. Our home farms will plant from 500 to 800 acres of cane. The mill will handle 300 tons (or 10 acres) of cane per day of 24 hours, and will be increased if necessary. Our season lasts five months, i. e., Nov. 1 to April 1, say 125 days. We begin construction of mills in August.

R. E. ROSE.

Wood-Working Factory.

CHATTANOOGA, TENN., June 27, 1887.

Editor Manufacturers' Record:

We are starting a lumber yard and manufacturing establishment, and will make sash, doors, blinds, mouldings, and do a general wood-working business.

HAMILTON LUMBER & MFG. CO.

Will Rebuild Saw Mill.

ATHENS, GA., June 28, 1887.

Editor Manufacturers' Record:

My mill was burned, and I will rebuild soon.

J. R. CRAWFORD.

ATHENS, GA., July 2, 1887.

Editor Manufacturers' Record:

A charter has been applied for by J. H. Rucker, James Camak, A. L. Hull, T. W. Cherry and R. L. Bloomfield under the name and style of the Bloomfield Water-Power Co. It has not transpired yet what this company intend to do, whether it is their purpose to fit up power and buildings to be leased or rented, or whether they will go regularly into manufacturing. They have the Athens Manufacturing Co backing them, whose capital has outgrown the power they occupy at Athens, Ga., and are seeking a place where they can continue to expand their power of production. This company came out of the war with 1,800 spindles, well worn. They have paid 10 per cent. on \$100,000 each year since, and increased their productive power to 5 times what it was in 1865; also cast out all of their original machinery of 1865 and replaced it with new. The water-power that is now held by these gentlemen I consider fourth on the list of American water-powers. The best calculation of its horse-power is 15,000.

R. L. BLOOMFIELD.

PULASKI, TENN., June 26, 1887.

Editor Manufacturers' Record:

Ground was broken Tuesday for a new Episcopal church in Pulaski, Tenn., to cost about \$3,500. Jno. W. Morton, Laps. D. McCord and associates are negotiating for 500 acres of the heights adjacent to Pulaski, Tenn., for the purpose of planting out a fruit farm on a gigantic scale, to be owned and operated by a stock company.

LAPS. D. MCCORD.

Contemplate Doubling Capacity.

CEDAR FALLS, N. C., July 5, 1887.

Editor Manufacturers' Record:

We have contracted with the Providence Steam & Gas Pipe Co., of Providence, R. I., to put in our mills a complete system of the Grinnell sprinklers. We also contemplate doubling the capacity of our mills.

CEDAR FALLS MFG. CO.

O. R. COX, Treasurer.

MIDDLEBURG, FLA., June 26, 1887.

Editor Manufacturers' Record:

I have built a pole road eight miles long for one of the Tanner & Delany pole road locomotives, said to be the best road of the kind ever built in this State. The manufacturers claim the locomotive now in transit for us is the largest, handsomest and best ever built by them.

A. S. CHALKER & CO.

ALPINE, ALA., June 28, 1887.

Editor Manufacturers' Record:

I have erected a lath mill, and I and others have erected a planing mill and dry kilns, known as the Nottingham Planing Mill Co.

J. L. CONNER.

THE MARKETS.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, July 6, 1887.

From all parts of the South come the most glowing reports as to the condition of the crops. While it is yet too early to make any predictions as to the yield of cotton, the corn and wheat crops are doubtless safe, and these are better than for a long time. Of corn especially the crop promises to be very large, and reports from different points estimate the probable yield as greater than for many years, some reports putting it better than any year since the war. These fine prospects have infused new life into the agricultural interests, and farmers are very cheerful as to the probable results of their year's labor. Good crops mean good business throughout the South, and if the present prospects are realized, we will see great activity in all lines of trade and industry.

Manufactured iron shows no change, the volume of trade and prices continuing about the same as last reported. We quote as follows:

Ref. Bar Iron, 1 to 6 3/4 to 1.....	2.10@	2.40c
" " 1 to 4 3/4 x 1 1/4 to 1.....	2.10@	2.40c
" " 3/4 to 2, round and.....	2.10@	2.40c
Hoop Iron, 1 1/4 wide and upward.....	2.50@	3 c
Band Iron, from 1 1/4 to 6 in. wide.....	2.40@	2 3/4 c
Horseshoe Iron.....	3 @	3 1/2 c
Norway Nail Rods.....	4 1/2 @	5 1/2 c
Black Diamond Cast Steel.....	8 1/4 @	10 c
Spring Steel.....	3 @	4 1/2 c
Common Horse Nails.....	3 1/4 @	4 c
Railroad Spike, 5 1/2 x 9-16.....	8 @	9 c
Steel Boiler Plate.....	2 1/4 @	3 c
Iron Boiler Plate.....	3 1/4 @	4 1/2 c
Boiler Tubes.....	4 1/2 @	off list

There are some indications of improvement in the iron market. Old rails have stiffened up and are now held at \$22.50 to \$23, an advance of about \$1 a ton, while old car wheels are also higher. Pig iron remains unchanged, consumption continuing to absorb the output about as rapidly as made, leaving no accumulation of stocks. We quote as follows:

Baltimore Charcoal Wheel Iron (all Virginia C. B. Charcoal Wheel Iron.....	27 00@	29 00
Anthracite, No. 1.....	20 00@	22 00
" " 2.....	18 00@	20 00
" " 3.....	16 00@	18 00
" " Mottled and White.....	14 00@	15 00
Old Rails.....	22 50@	23 00
Old Steel Rails.....	22 00@	23 00
No. 1 Wrought Scrap.....	22 00@	22 50
Old Car Wheels.....	18 00@	18 50

HARDWARE.

The screw makers have adopted a new price on screws, lowering the list on small sizes, increasing the list on larger sizes, with no change in discounts, the net price on a general or average order for screws being the same. The change was made to

keep out of this country the foreign screws. The prices on sledges and hammers have been reduced to about the prices existing last January. The tack market remains in a very unsatisfactory condition, caused by some makers, putting up tacks in any weight required for the price. To explain the matter more fully we give herewith the weight of 10 oz. tacks per dozen, known as 1/2 weight goods, and those sold for 1/2 weight goods by some manufacturers:

	Per dozen.
First class goods, 10 oz., 1/2 weight weigh.....	60 oz.
So called, 10 oz., 1/2 weight weigh.....	38 oz.
So called, 10 oz., 1/2 weight weigh.....	33 oz.

The latter is sold to the trade as special weights. By this means manufacturers who adhere to full weights are undersold as well as the dealer. Dealers in ordering tacks should expressly stipulate for either full weight, full 1/2 weight or full quarter weight as they may need. The demand for goods is brisk and orders are being entered for present and fall delivery. Some goods, such as screw hook hinges, are much stiffer, while mattocks and picks are low. The stock and die makers have advanced their prices. The cause for cutting has been removed by Butterfield & Co. agreeing to confine their trade to Canada, King & Co. and Bolroyd & Co. to have the sale of goods in this country. The advance has been slight, but further advances, it is said, may be expected.

Nails are quoted at \$2@2.10, and it is claimed that no sales are being made at lower figures.

Philadelphia Iron Market.

PHILADELPHIA, July 5, 1887.

The fall demand will not set in for perhaps a week yet. Some little repairing is to be done. The iron trade is healthy and no accumulating of stocks is heard of through the State. In fact when it comes to foundry iron there is a scarcity and prices are higher for say 7 or 8 brands which are almost out of the market. Quotations are \$21@22 for No. 1, \$19@20 for No. 2, and \$17@18 for gray forge. The mill owners have not bought much as yet, but we look for some large transactions about the middle of the month on a basis of \$17.50 to \$18. The bar mill owners are looking forward to a very heavy business. The nail trade is active enough, but prices are 2.10@2.20; skelp iron 2.10; muck bars \$31.50; plate and angle iron 2.25; tees 2.75; beams and channels 3.30; steel rails \$40@38.50; old rails, asking price, \$24; offers \$23; no sales of foreign material. The next few days will bring in a good number of railroad material and bridge iron inquiries, and we think it probable that the heavy fall and winter orders will be placed within a few weeks. We are hearing very little from foreign markets one way or the other, but are receiving more material from there than there is just occasion for.

Louisville Iron Market.

Specialty reported by W. B. BELKNAP & Co., Nails, Wire, Iron, Hardware, Carriage and Wagon Goods.

LOUISVILLE, KY., July 4, 1887.

Bar iron is fairly firm, and, as the mills declined July business up to the last of June, it is presumed will be in good supply, as manufacturers are bound to seek new orders.

Sheet iron is held quite firmly by the mills. There is a good deal of inquiry for the light gauges, but not much disposition to contract at the prices made by the association. Galvanized sheet is low and selling freely.

Steel.—Cast steel is jobbing in fair lots inasmuch as contractors are pushing their work during fair weather.

Nails.—There has been a material advance in nails of late, but, as many of the mills declined July business altogether, it is probable that they may come into the market with products to sell, which may prevent further appreciation.

Wire is very low, both plain and barbed.

Will Build Roller Flour Mill.

MILFORD, TEXAS, June 27, 1887.
Editor Manufacturers' Record:
 We will build a roller flour mill. The capacity will be 75 barrels per 24 hours.
 HUDSON & THWAILKILL.

MONTGOMERY, ALA., June 29, 1887.
Editor Manufacturers' Record:

I intend building a new and complete cracker and candy factory late this fall or early the coming spring. T. H. CARR.

LAKE CHARLES, LA., June 27, 1887.
Editor Manufacturers' Record:

There has been a hoop and stave factory company established here, and is known as the Lake Charles Hoop & Stave Factory Co. A. B.

Will Build Machine Works.

NASHVILLE, TENN., June 28, 1887.
Editor Manufacturers' Record:
 The Great Southern Iron, Brass & Engine Co. will locate in West Nashville to do general machine work. Capital \$300,000. H. R. Walker will be general manager. The Fuel Economizer Co. will also build their machines in same works
 THOS. PARKES.

SHREVEPORT, LA., June 25, 1887.
Editor Manufacturers' Record:
 I have the contract for the Shreveport Charity Hospital, which will cost when completed as per contract, about \$17,000.
 L. A. PARISHER.

To Build an Ice Factory.

MORRISTOWN, TENN., June 29, 1887.
Editor Manufacturers' Record:
 An organization has been effected for the manufacture of ice, but the capacity of the machinery has not yet been decided. We are receiving and examining catalogues and price-lists from different companies.
 O. F. HAMMOND, Secty. & Treas.

Will Erect Saw and Planing Mill.

CENTER HILL, FLA., June 25, 1887.
Editor Manufacturers' Record:
 We will build a saw mill and will add shingle mill and planing mill. We manufacture vegetable crates and orange boxes.
 J. G. LAMOREUX.

ANNISTON, ALA., June 29, 1887.
Editor Manufacturers' Record:
 We have erected machinery to manufacture galvanized iron cornice and all kinds of tin and sheet iron ware. We will commence work at once with a large force of experienced hands. M. W. McCRAW & Co.

CHATTANOOGA, TENN., June 28, 1887.

Editor Manufacturers' Record:

We have just applied for a charter for a railroad to be built on the north side of the river, which will run from the north bank of the river to Walden's ridge via Lake View. The road will be known as the Tennessee River & Walden's Ridge Railway. We expect also in connection with this to run a system of street railways through Hill City.

SAML. R. READ.

HILLEARY, KEITH & KIRKPATRICK.

Real Estate AND Stock Brokers,

106 21st St., Birmingham, Ala.

Real Estate Advertiser containing interesting articles concerning Birmingham and Anniston, with a large list of city and suburban property, mineral and timber lands, sent FREE to any address.

An Opportunity Seldom Offered. FOR SALE

A CONTROLLING INTEREST IN THE
Texarkana Ice & Electric Light Co.

One of the best points South for the ice and light business. Earned last year 20 per cent.; business increased this year so far. Two ice machines, one Arc Light Dynamo, three Incandescent Dynamos, 800 lamps added this season; 20 years exclusive franchise for light; no gas in the city, and valuable railroad contracts for ice. For further particulars address
 J. A. POLHAMUS, Texarkana, Texas.

REAL ESTATE IN A Booming Alabama Town FOR SALE.

Three Hundred Choice Business and Residence Lots in the
CITY OF ANNISTON.

This property is the best in the city, and having been bought before the boom, will be sold at prices affording investors a rare opportunity to make certain and handsome profits. Address

F. M. HIGHT, Anniston, Ala.

Canning Factory Wanted

Crystal Springs, Miss., is one of the largest fruit and vegetable shipping points in the South. Every year large surplus is left on hand. We need a Canning Factory, and will render all reasonable assistance to an enterprising man of experience who will take hold of the matter.

Address

W. A. MASON, Crystal Springs, Miss.

For Sale, Cheap.

Two Second-Hand Horizontal Tenters, with Pin Chains.

Steam Pipes for Drying, and Engine for Driving. For further particulars address

GRANGER.

Care MANUFACTURERS' RECORD.

COPY OF ORDINANCE

Passed by the Council of the Town of West Point, Virginia, on the 21st day of April, 1879, and re-enacted and approved on the 22d day of March, 1887.

Be it ordained by the Council of the Town of West Point, Va., that any party or parties investing in property in this town for the purpose of conducting any enterprise, such as manufactories, packing houses, &c., and actually operating the same, they shall be exempt from all corporation taxes upon such property, and all machinery and improvements thereon, for the term of ten years from the purchase of such property.

It is also ordered that the Mayor is hereby instructed to advertise this ordinance in the "MANUFACTURERS' RECORD," a paper published in the City of Baltimore, Md.

E. WILKINSON, Mayor.

STEEL RAILS

COMPLETE OUT-FIT FOR

Logging, Mining and Plantation

RAIL AND TRAM ROADS.

Light Sections Rails and Spikes in stock.

Locomotives, Logging Cars, etc.

NEW AND SECOND HAND.

HUMPHREYS & SAYCE,
 OFFICE NO. 1 BROADWAY, N. Y.

WM. E. TANNER,

No. 1415 Main Street, Richmond, Va.

Is prepared to furnish promptly

LIGHT LOCOMOTIVES,
 Dummies for Street Railroads,
 Pole Railway Locomotives and Cars,
 ENGINES, BOILERS, & SAW MILLS.

Also, Freight Cars, of all styles, Railroad Spikes, Fish Plates, Bolts, Car Axles, Car Wheels, Trucks, Links, Pins, and other Car Forgings, Bar Iron, Steel Horse Shoes.

D. W. K. PEACOCK,
Real Estate Agent,
 CARTERSVILLE, GA.

Minerals a Specialty.

Refers to THE HOWARD BANK, Cartersville, Ga.
 J. W. RANKIN, Atlanta, Ga.

Cotton Machinery FOR SALE.

The Machinery of a 6,000 Spindle Spinning Mill, consisting of Openers, Cards, Railway Heads and Troughs, Drawing Frames, Slubbing Intermediate, Roving, Spinning and Twisting Frames. All in first-class condition. For particulars apply to

PAWTUCKET THREAD CO.

PROVIDENCE, R. I.

Factory for Sale.

The Sparta, Tenn., factory property, situated 1½ miles from Sparta, on the Calhoun river, and near a railroad, is for sale. The building is a splendid brick, four stories high, 60 by 100 feet, in good repair; new dam and race, 20 feet waterfall; 140 acres land, good brick dwelling and storehouse, several tenement houses; new machinery for making spokes and handles in the building, all in good running order. House was built for a cotton factory, and has room and water power to run 300 looms and 5,000 spindles. It belongs to the Bon Air Coal, Land & Lumber Co., who are engaged in mining coal, and offer this property at a great bargain. Enquire of SAML. I. KEITH, president Fourth National Bank, Nashville, or, G. G. DIBRELL, SPARTA, TENN.

For Sale.

A large vein of Argentiferous Galena Ore, that assays \$50.00 to \$80.00 per ton, Silver, Gold and Lead.

Developed and ready for machinery, with 150 acres of land and fine water power. Ten (10) miles from railroad.

For particulars address

J. W. STEWART,
 Box 304, Knoxville, Tenn.

For Sale

1 No. 25 Bradley Cushioned Hammer \$225
 1 No. 7 Sturtevant Fan with counter-shaft and lot blast pipe, pulleys, &c. \$100
 7 Pipe-Threading Machines (power) \$275
 Thread from ½ to 2-in. pipe. Can be adjusted with dies to thread bolts same size.

Address,

J. L. ALLNUTT,
 CHATTANOOGA, TENN.

FOR SALE.

1 second-hand 4 horse power boiler and engine; 1 No. 2 Kissel hand punch, second hand; 1 second-hand 4 ft. stave jointer, for butter tubs; 1 wood frame rip saw, new; 1 emery wheel stand, collars on both ends; also, 1 lot 8 arm pulleys. The above for sale cheap, or will trade for 24 inch iron planer. Address ULRICH & ALLISON, Rock Falls, Ill.

LEDBETTER & CO.

Land and Loan Association.

(INCORPORATED.)

Commission Dealers in Lands, Stocks and Bonds.

City and Mineral Property a Specialty.

Capital Stock
 \$100,000.

REFERENCES:
 First National Bank, Anniston, Ala.
 Col. Jno. M. McKleroy, Pres. Anniston City Land Co.

ANNISTON, ALA.

CORRESPONDENCE SOLICITED.

Cincinnati Iron Market Report.

Specially reported by ROGERS, BROWN & Co., Pig Iron Commission.

CINCINNATI, July 4, 1887.

Trade has been active in pig iron since last report, the buyers being mainly rolling mills and agricultural works. The settlement of the labor question at Pittsburg without a strike has led to considerable inquiry for mill grades and old rails, and such material is firmer than a week ago. All accounts agree that stocks are being steadily reduced under the protracted coke strike. How long this reduction can go on without materially affecting prices is a question. The firm attitude of the furnace men in refusing to take coke at current prices should the ovens start renders the situation still more complicated. Trade in charcoal iron is very heavy. In past two weeks many of the large malleable works in the West have contracted for their season's supply. Some large blocks of car-wheel iron have also been sold. The agricultural men have not placed large orders yet, but are preparing to do so this month. The rapid decrease in charcoal iron stocks rather stimulates activity in this branch of the market. We make no changes in last week's quotations, which are for cash f. o. b. Cincinnati:

HOT-BLAST FOUNDRY.

Ohio and Southern Strong Coke No. 1.	20 00@20 50
" " " " " " " " " " " "	No. 2. 19 00@19 50
" " " " " " " " " " " "	No. 3. 18 00@19 00
Ohio Soft Stonecoal, No. 1.	20 00@20 50
Ohio Soft Stonecoal, No. 2.	19 00@19 50
Mahoning and Shenango Valley Coke, No. 1.	21 50@22 00
Hanging Rock Charcoal No. 1.	23 00@24 00
" " " " " " " " " " " "	No. 2. 22 00@23 50
Tennessee & Alabama Charcoal No. 1.	22 00@23 50
" " " " " " " " " " " "	No. 2. 21 00@22 00

FORGE.

Strong Neutral Coke.	18 00@18 50
Mottled " " " " " " " " " " " "	16 50@17 00
Cold Shortings.	17 00@17 50

CAR WHEEL AND MALLEABLE.

Southern Car-Wheel Iron.	25 00@26 00
Hanging Rock Cold Blast, No. 1.	25 00@26 00
Hanging Rock Cold Blast, No. 2.	— @ —
Lake Superior Malleable.	25 00@26 00

Louisville Iron Market.

Specially reported by Geo. H. Hull & Co., Commission Merchants for the sale of Hot and Cold Blast Pig Iron.

LOUISVILLE, KY., July 4, 1887.

The demand for pig iron for the last week has been better than for two weeks previous, and a greater number of orders, mostly for foundry irons, have been booked. The market shows a firmer tendency, and buyers have had to come to the views of sellers. There are still some speculative lots on the market, but there are many grades not included in these lots, and when sold, must come from the furnace. The continued activity in railroad building, and the continued scarcity of some brands and grades, is giving renewed tone to the market. We quote for cash as below:

PIG IRON.

Southern Coke, No. 1 Foundry.	19 50@21 00
" " " " " " " " " " " "	" " " " " " " " " " " "
" " " " " " " " " " " "	" " " " " " " " " " " "
Hanging Rock Coke, No. 1 Foundry.	19 00@20 00
Southern Charcoal, No. 1 Foundry.	21 00@22 00
Silver Gray, different grades.	17 00@18 50
Southern Coke, No. 1 Mill, Neutral.	17 50@18 00
" " " " " " " " " " " "	" " " " " " " " " " " "
" " " " " " " " " " " "	" " " " " " " " " " " "
" " " " " " " " " " " "	" " " " " " " " " " " "
Southern Charcoal, No. 1 Mill.	18 50@19 50
White and Mottled, different grades.	16 00@17 00
Southern Car Wheel standard brands.	25 00@26 00
" " " " " " " " " " " "	other brands. 22 00@23 00
Hanging Rock Cold Blast.	25 00@26 00
" " " " " " " " " " " "	" " " " " " " " " " " "

Chicago Iron Market.

Specially reported by ROGERS, BROWN & Co. W. BACKMAN, Resident Agent.

CHICAGO, July 4, 1887.

The tone of the pig iron market is firm, and offers were refused at the close of the week that would have been accepted at the opening. This is the result of some large buying and still larger enquiries. It is now pretty well settled that in leading lines of manufacture, such as car building, pipe making, malleable and agricultural work, etc., there will be no falling off in consumption during the remainder of the year. This is thought will maintain a steady and possibly higher market. The three-cornered dead-

lock between coke makers, furnaces and working-men still continues in the Connells-ville district, and the furnaces remain banked. About 45 per cent. of the ovens only are remaining. The best grades of iron are hard to get. There is not much disposition though to force up prices. We quote for cash f. o. b. cars Chicago:

COKE AND STONE COAL FOUNDRY.

Ohio (Hanging Rock) Softeners No. 1.	21 50@22 50
" " " " " " " " " " " "	" " " " " " " " " " " "
" " " " " " " " " " " "	" " " " " " " " " " " "
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" " " " " " " " " " " "	" " " " " " " " " " " "

CHARCOAL FOUNDRY.

Lake Superior.	23 50@24 00
Southern.	22 50@23 00
Hanging Rock.	24 50@25 50

CAR WHEEL AND MALLEABLE.

Lake Superior.	23 50@24 50
Standard Southern.	24 00@25 00
Hanging Rock, cold blast.	27 00@29 00
" " " " " " " " " " " "	" " " " " " " " " " " "
" " " " " " " " " " " "	" " " " " " " " " " " "

OLD MATERIALS.

Old Rail, American.	24 00@25 00
Old Wheels.	20 50@21 50

St. Louis Iron Market.

Specially reported by ROGERS, BROWN & Co., Gay Building, 204 N. 3rd street, St. Louis. W. H. SHIELDS, Manager.

ST. LOUIS, July 4, 1887.

The general market has been rather more quiet the past week, but on the other hand the very large buyers have been placing some orders which have made up a full aggregate. The idea of a further decline in prices, which was held on to so long and tenaciously by buyers, seems to be about abandoned, and contracts for future supply are now freely talked of. The scarcity of desirable kinds of iron is more seriously felt every day. This is particularly true of Southern coke irons, which now form the basis of most mixtures. The avoidance of a strike at Pittsburgh seems to have had a reviving effect on mill irons. The market ranges about with last week in prices. We quote cash f. o. b. St. Louis:

HOT-BLAST CHARCOAL.

Missouri.	22 00@22 50
Southern.	21 00@22 00

COKE AND COAL.

Southern No. 1.	21 00@22 00
Southern No. 2.	20 00@20 50
Ohio Softeners.	22 00@24 00

MILL IRONS.

Missouri.	20 00@21 00
Southern No. 1.	18 50@19 00
Southern No. 2.	17 50@18 00

CAR-WHEEL AND MALLEABLE IRON.

Southern.	24 00@27 00
Lake Superior.	23 00@25 00

MISCELLANEOUS.

Old Rails.	22 50@23 00
Old Wheels.	20 00@21 00
Connellsville Coke, (Frick's).	— @ 6 15

Chattanooga Iron Market.

Specially reported by LOWE & TUCKER, Brokers and Commission.

CHATTANOOGA, TENN., July 4, 1887.

The situation in general business is not materially changed since our last report and all lines of trade appear to be moving along in the usual active manner. Pig iron remains steady and prices range the same as they have for the last month or so. So far as is practicable to do the merchants, as well as the manufacturers, are evening up their stocks with a view of seeing where they stand in a financial point of view, and so far as heard from are very satisfactory. The five furnaces at Sheffield are being pushed in their construction as fast as economy would dictate. One of them, the Sheffield Iron Co's, is nearly completed.

TO READERS OF ADVERTISEMENTS.

Readers of the MANUFACTURERS' RECORD who order any goods herein advertised, or ask for information concerning them, will oblige the publishers by stating that they saw the announcement in the columns of this paper.

A Big Chance

—THE—
Canton Cotton Factory,
CANTON, MISS.,
Is Offered for Sale at
\$18,000

This factory is situated on the line of the Illinois Central Railroad, one mile north of the city of Canton, Miss., in a splendid cotton region, good water supply, cheap fuel (wood and Alabama coal) and abundant labor. The factory is equally well adapted for a WOOLEN MILL OR COTTON-SEED OIL MILL. The property consists of 28½ acres of land, running parallel to the Railroad, and adjacent to it. The factory building is in the center of the tract, one hundred yards from the railroad, is a brick building, substantially built, 200x90 feet, two stories high, brick chimney stack 75 feet high. The factory contains ONE ENGINE, 200 HORSE-POWER; TWO LAPPERS; A CONSIDERABLE QUANTITY OF SHAFTING AND PULLEYS. There is a double dwelling house on the property. The climate healthy. Manufacturing in Mississippi is exempt from taxation. The property has been paid for in full by the owner; it is unincumbered. The building alone cost \$40,000. This is a magnificent opportunity to engage in cotton manufacturing in the South. For full particulars, address

D. ESTE REYNOLDS,

Care MANUFACTURERS' RECORD, Baltimore.

BERNHARD DIETZ, Manufacturer of Printers' Rollers, and Roller Composition. Factory, cor. Light and Mercer streets, Baltimore. Prices: Composition, (bulk) 30 cents per lb.; for Casting, -150, 30 cents per lb. Orders by Mail promptly attended to.

Roller Chain Belting



Detachable in every Link
FOR IMPROVED
ELEVATORS,
Conveyers,

AND
DRIVING BELTS.

FOR HANDLING
Coal, Ores, Grain,
CLAY, BRICK, &c.

ADDRESS THE
Roller Chain Belting Co.
COLUMBUS, OHIO.

Also Manufacturers of the
Legg Coal Mining Machines
and Rotary Power Coal Drill.
Send for Illustrated Catalogue.
R. SWORMSTEDT & CO.,
Averts, Baltimore.



Bates' Hand Elevators.
Patented April 18, 1871. Re-issued July 26, 1876.
OVER 6,000 IN USE.

Adapted for Warehouses, Stores, Factories, Hotels, Public Institutions, and every place where merchandise, &c., is transferred from one story to another.

JAMES BATES, Patentee,

Nos. 1 3 & 5 President Street. BALTIMORE.

IMPORTANT TO USERS OF VALVES.



Owing to the popularity the JENKINS BROS. VALVES have attained, the market has been subject to BASE IMITATIONS.

One important defect in the imitations referred to is insufficient opening for inlet of steam or fluid, thereby checking the flow. Purchasers of Valves should be careful to know that they are of capacity suited to size of pipe to which the Valves are to be attached. All Valves manufactured by

Jenkins Bros. are Warranted Full Opening.

JENKINS BROS. { 71 John Street, New York.
105 Milk Street, Boston.
13 So. Fourth Street, Phila.

South Pittsburg Pipe Works.

Geo. E. Downing, Pres. James Bowron, Vice-Prest. Dr. W. R. Townsend, Secy.

Manufacturers of



South Pittsburg, Tenn

WARREN WOOD & CO.
115 Broadway, N. Y.
EASTERN AGENTS.

CHATTANOOGA FOUNDRY & PIPE WORKS.

DAVID GILES, Pres. C. B. IBESTER, Vice-Prest. M. LLEWELLYN, Secy. and Treas.

Successors to D. GILES & CO., Chattanooga, Tenn., Manufacturers of



Also Castings and Pat-
terns of Every Descrip-
tion made to order.

—BUY—

“THE NEW SOUTH.”

Price \$2.50. Handsomely Bound in Cloth.

MANUFACTURERS' RECORD Co., Publishers.

THE

Hercules Water Wheel

IN THE SOUTH.

WHAT SOUTHERN USERS SAY OF THE HERCULES.

There is probably no higher authority in the South on water wheels than Mr. John Hill, civil and mechanical engineer, of the great Eagle & Phenix Cotton Mills, at Columbus, Ga. Read what he says of the Hercules Wheel.

The Best Wheel We Have.

JOHN HILL, CIVIL AND MECHANICAL ENGINEER,
Reference—Eagle & Phenix Mfg. Co.

COLUMBUS, GA., April 30, 1887.

As to my opinion of the Hercules Wheel, will say: In our mill (the Eagle & Phenix) we have twenty-one (21) water wheels of various kinds, three of them being Hercules. I regard the Hercules as being by far the best wheel of any we have. It is the best in workmanship, absence from repairs, large per cent. in power, and in general satisfactory results. I know of no wheel its equal. At Holyoke, testing flume a few weeks since, I personally witnessed a test of a Hercules of the ordinary construction, which gave 83 96-100 per cent. of efficiency.

Yours truly,

JOHN HILL.

Cannot Speak too Highly of the Hercules Wheel.

JAMES RIDDLE, SON & CO.
Brandywine Cotton Mills.

KENTMERE, DEL., April 27, 1887.

In reply to your inquiry as to the working of a "Hercules Water Wheel" now running at our mills, would say that we put in nearly two years ago a 39-inch Hercules Wheel, running under a 14-foot head. It is driving up to full regular speed three hundred and three heavy looms, with only half gate. We are about to enlarge the weave mill and add three hundred more looms, which will be driven by the same wheel. We cannot speak too highly of the Hercules. It has absolutely run without cost or derangement since it started, and has given eminent satisfaction in every way.

Yours truly,

JAMES RIDDLE, SON & CO.

Perfectly Satisfactory in Every Way.

PORTER WOOLEN MILL.

J. H. Porter, President. J. W. Robertson, Gen. Manager.

CLARKSVILLE, GA., April 29, 1887.

In reply to enquiry as to my opinion of the Hercules Turbine Water Wheel, say: I have put in two, one about

six years since, and the other in 1883, and think so highly of the wheel that I shall use another in cotton mill this company is now constructing. Neither of the wheels alluded to have given the slightest trouble, and their working has been perfectly satisfactory in every way.

Yours truly,

J. W. ROBERTSON, Gen. Man.

The Hercules Wheels Have Given Perfect Satisfaction.

ROSWELL MANUFACTURING CO.

Sheetings, Shirtings, Checks, Yarns, &c.

ROSWELL, COBB COUNTY, GA., April 29, 1887.

In answer to yours of 25th inst., asking our opinion of the Hercules Wheel, will say our experience is as follows: In our new mill, built about four (4) years ago, we put a 30-inch Hercules Wheel, under a 21-foot head of water. It has given such satisfaction running this (5,000) five thousand spindle mill, that last summer, when we were compelled to put in a new wheel at our old mill, running 7,000 spindles, looms, twisters, &c., we put in a 36-inch Hercules Wheel, under a 27-foot head of water. All I can say is we have surplus power in both mills, have lost no time by any defect of wheels, and if we were putting up any more mills, would use the Hercules Wheel. They have given us perfect satisfaction.

Yours respectfully,

F. J. MINHINETT, Prest.

A Good Wheel, and Has Given Good Satisfaction.

PEE DEE MANUFACTURING CO.

Plaids and Wraps.

ROCKINGHAM, N. C., April 30, 1887.

We have been using the Hercules Water Wheel for more than six years. Our superintendent says it is a good wheel, has given good satisfaction, and its performance is equal to the claims of the maker. We have a head of 17 feet. Our wheel has a diameter of 39 inches. Under this water pressure the wheel has moved 4,000 spindles and the needed preparation, and 164 plaid looms. The above includes the dye house, machine shop and all other machinery which we employ.

Very respectfully,

WALTER L. STEELE, Prest.

Best Wheels I Have Ever Seen.

MARIETTA PAPER MANUFACTURING CO.

Book, News and Wrapping Papers.

MARIETTA, GA., April 30, 1887.

In reply to your favor of the 25th inst.: I am using four Hercules Water Wheels, two 12-inch, one 24-inch,

and one 30-inch. They have given me perfect satisfaction, and I think that they are the best wheels that I have ever seen.

Yours truly,

S. A. ANDERSON.

Has Never Given the Slightest Trouble.

PACOLET MANUFACTURING CO.

Jno. H. Montgomery, Prest. and Treas.

PACOLET, S. C., April 29, 1887.

Replying to yours of 25th, would say: We have a 54-inch Hercules Water Wheel running, under 20-foot head, 12,000 spindles and 328 looms, with other necessary machinery. Has been running about three and a-half years, and has never given us the slightest trouble; not an hour's stoppage during the whole time.

Very truly yours,

JNO. H. MONTGOMERY, Pres. and Treas.

Well Satisfied With It.

WM. J. RUSSELL,

Manager Princeton Factory.

ATHENS, GA., April 28, 1887.

I have used the "Hercules" wheel since 1881, and am so well satisfied with it that I should not purchase any other if in want of a first-class wheel. It does all the manufacturers claim for it.

Yours truly,

WM. J. RUSSELL, Manager.

Has Given Entire Satisfaction.

HOLCUMB'S ROCK, BEDFORD CO., VA.,

April 28, 1887.

The Hercules Wheel has given entire satisfaction.

Very respectfully,

J. A. HARRIS & CO.

Unhesitatingly Say its the BOSS Wheel.

BUZELA, GA., April 29, 1887.

I have been using a 21-inch "Hercules Water Wheel" since August 1880, and unhesitatingly say it is the BOSS wheel. It has performed with utmost satisfaction, and given more power than the makers claim, using water with more economy than any wheel I ever knew. T. W. G. Inglett, Esq., who has put up two "Hercules" for parties, says "it can't be beat."

Very respectfully,

BRAD. MERRY.

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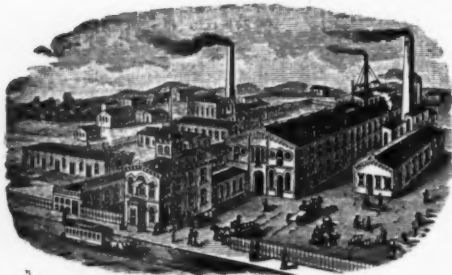
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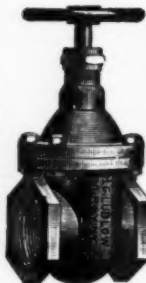
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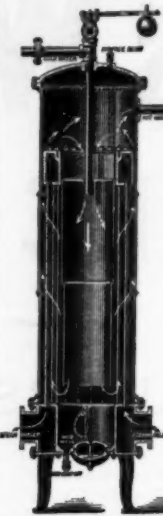
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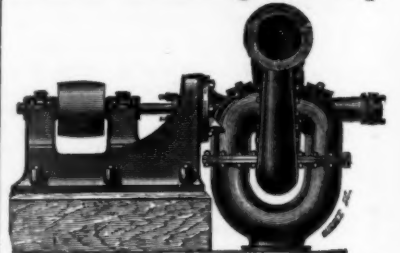
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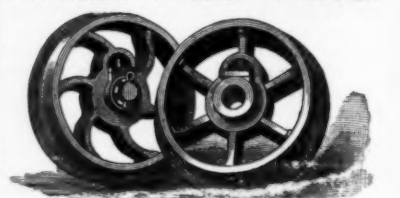
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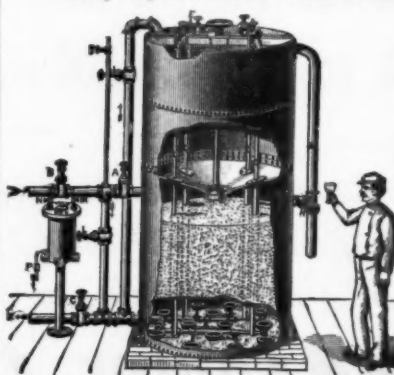
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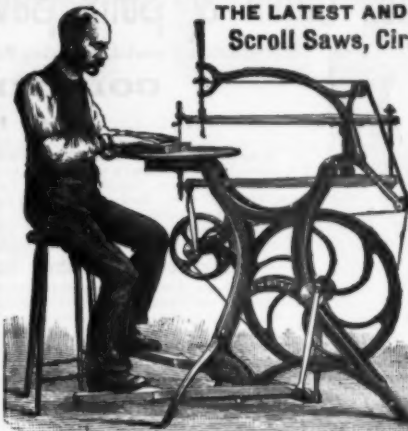
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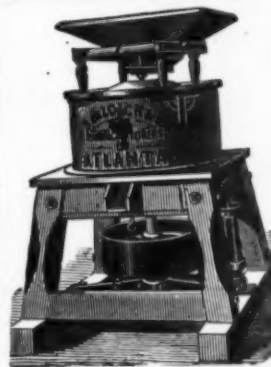
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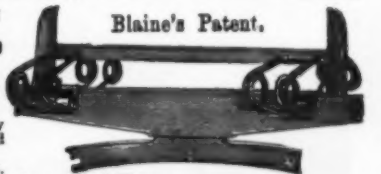
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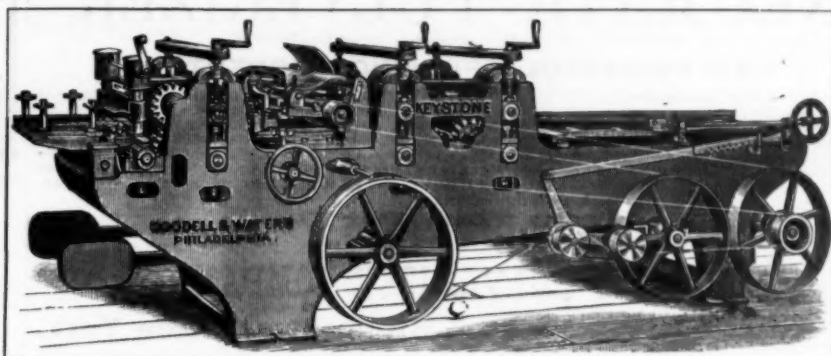


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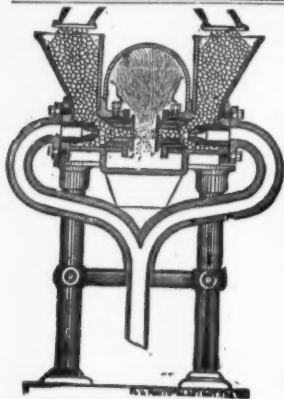
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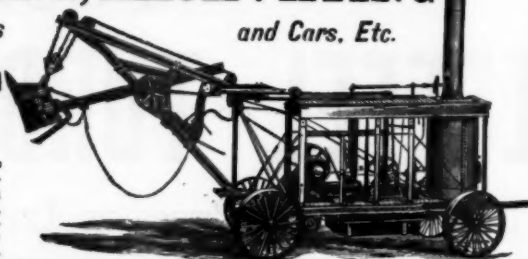
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Crown Point Iron Co., Crown Point, N. Y.
Belvidere Iron Co., 38 Broadway, N. Y.
Sea Island Chemical Co., Beaufort, S. C.



Literary Notes.

THE Century for July contains a paper by John Burroughs, on wild flowers, which is profusely illustrated; "The Sportsman's Music," by W. J. Hardsen; "Animal Locomotion in the Muybridge Photographs;" "Sister Toddhunter's Heart;" "Crooked John;" "Hundredth Man." The Lincoln History closes up the Kansas troubles and discusses their corollary, the "Lincoln-Douglas Debates." Interesting and hitherto unpublished letters by Lincoln and Greeley are given. The war series, followed since the start by the closest attention of thousands, compasses this month the hundred days of battle in "The Struggle for Atlanta," narrated by General O. O. Howard, while in the next number General Joseph E. Johnston, his opponent, is to write of the fight against Sherman. Short communications appear from General Hunt, in reply to General Walker on "The Question of Command on Cemetery Ridge," and from General H. V. Boynton on the late Colonel R. N. Scott and his work on the war records. "Christian Science" and "Mind Cure," by Dr. Buckley, and "The Potential Energy of Food" by Professor Atwater, are two papers of a suggestive and valuable character by experts in the investigations which they record.

THE July Wide Awake has an interesting article on what sort of a boy George Washington was, with another hatchet story as good as the cherry-tree story—and more human. Charles Egbert Craddock's story, begun in the June number, halts at a coon-hunt. The other story-tellers stop to take breath as they can. There is more of what goes on inside of a bank, a peep at the Harvard Annex, a boy misses his 4th of July, and a picture story of animals and their animal friends. Wide Awake is as bright and full and solid and good as ever. \$2.40 a year; but there isn't a boy or girl that can't get it for work. Send 5 cents for a sample copy to D. Lothrop Co., Boston, and there will come with it a primer about the other Lothrop magazines.

TRADE NOTES.

THE Foss Manufacturing Co., of Springfield, Ohio, has secured an order from the Southern Cotton Oil Co., of Charlotte, N. C., to furnish their Scientific oil cake crushers and grinders for all the new oil mills to be erected in the South. This is said to be the largest order ever given at one time for such machinery, and involves the largest amount of money. It will require an extra force of men to build the crushers in time for delivery, which will be early in the coming fall.

MACHINERY trade circles in Boston were considerably agitated last week over a large contract for boiler and pipe coverings which was to be awarded by a leading steam heating firm. The Chalmers-Spence Co., of New York, finally took the prize. The specification called for some 25,000 feet, or nearly five miles of all asbestos pipe covering.

MESSRS. MORSE, WILLIAMS & Co., of Philadelphia, manufacturers of elevators and hoisting machinery, write us: "Amongst our Southern orders for past month are elevators for Charles B. Allen, Augusta, Ga.; C. P. Poppenheim, Charleston, S. C., and two each for Darby & Co. and Wise Bros., Baltimore."

THE Porter-Hamilton engine seems to grow steadily in favor for large powers. Last week the builders, William Tod & Co., of Youngstown, Ohio, shipped four to different parties, aggregating 1,300 horse-power. They are also building an 84-inch blowing engine for an Ohio furnace.

MESSRS. WILLIAMS & ORTON, manufacturers of the Charter Gas Engine, Sterling, Ills., write us as follows: "Our orders are coming in very rapidly for the 'Charter,' and an extension will be a necessity in order to keep in sight of them. The gasoline attachment, by which the 'Charter' makes its own gas at a cost of about one cent an hour per indicated horse-power, is a grand success, and enables us to place them everywhere and for any purpose. This is a field we claim to have all to ourselves, as the gasoline attachment, by which the 'Charter' is run, is covered by our patents, and can be operated independent of all regularity-made gas."

THE Real Estate Advertiser, published at Birmingham, Ala., by Messrs. Hilleary, Keith & Kirkpatrick, containing interesting matter concerning that city and Anniston, with a large list of city and suburban property, mineral and timber lands, will be sent free to any address.

"Have You Heard of it?"

What's that! Solid trains between Cincinnati and St. Louis over the C. H. & D. R. R. and Vandalia Line. Commencing Sunday night, June 19th, the C. H. & D. and Vandalia will establish their through passenger line between Cincinnati and St. Louis and will put on solid trains, made up of elegant parlor chair cars on day trains and pullman drawing room and sleeping cars on night trains. The morning trains out of Cincinnati will leave C. H. & D. depot, Fifth and Hoadly streets, at 7.45 A. M. daily, except Sunday. The evening train will leave at 7.00 P. M., and will run daily. The purchasing of the Vandalia Line by the C. H. & D. Co. now gives them the best line between Cincinnati and St. Louis as the track is first-class and their equipment unequalled. Quick time, comfort and safety is what the traveling public want, and with this new line established no opposition line can secure the business against them.

Important.

When visiting New York city, save baggage express and carriage hire, and stop at the Grand Union Hotel, opposite Grand Central Depot.

600 handsomely furnished rooms at \$1 and upwards per day. European plan. Elevators and all modern conveniences. Restaurants supplied with the best. Horse cars, stages and elevated railroads to all depots. You can live better for less money at the Grand Union Hotel than any other first-class hotel in the city.

THE air of perfection, cleanliness and home like comfort, which is so apparent at the American House, Boston, is one of the characteristic features of that well regulated establishment.

THE Palace Hotel, Cincinnati, Ohio, is said to enjoy the reputation of being the best \$2 hotel in America. 250 rooms; 140 front rooms. All conveniences and excellent cuisine.

A TIN or metal roof painted with two coats of Dixon's Silica Graphite Paint, and a third coat the following season, will not need painting again for 10 years or longer. Send for circulars and testimonials, and a sample piece of tin roof that was painted 13 years ago. Address Jos. Dixon Crucible Co., Jersey City, N. J.

List of Patents.

The following Patents were granted to citizens of the Southern States, bearing date June 28, 1887. Reported expressly for this paper by Louis Bagger & Co., Mechanical Experts and Solicitors of Patents, Washington, D. C.

Barclay, W. C., Wellsburg, W. Va. Pipe joint.....365,425
Bayne, H. P., and J. Dwyer, Buxton, La. Fire back and andiron.....365,360
Behan, William, and P. Frienschner, Texarkana, Tex. Gln saw sharpening machine.....365,567
Berge, Henry, Baltimore, Md. Stone clamp and dowl.....365,427
Browne, B. F., Storeville, S. C. Fertilizer distributor.....365,429
Burdon, D. P., Sanford, Fla. Machine for extracting fibers.....365,430
Catchings, T. J., Taylor, Texas. Churn.....365,364

Cronan, J. W., Tiptonville, Tenn. Hub.....365,367
Cross, Frank, Louisville, Ky. Burglar-alarm and call-bell.....365,368
French, S. H., and W. J. Maltby, Baird, Tex. Nut lock.....365,741
Gantenberg, Bernhard, Covington, Ky. Saah fastener.....365,679
Holladay, J. H., Holladay, Va. Lock for concealed hammer guns.....365,383
Jones, J. C., Crystal Falls, and S. B. Marshall, Denton, Tex. Attachment for harvesters and mowing-machines.....365,749
Locke, W. J., San Antonio, Texas. Plow.....365,615
McDonald, Donald, Louisville, Ky. Temperature alarm.....365,399
Pattison, A. S., Cambridge, Md. Cuff-holder.....365,626
Reading, William, Rockville, Md. Car spittoon.....365,537
Rickman, R. L., Graham, Tex. Calf weaner.....365,538
Rows, Robert, Madisonville, Ky. Railway switch.....365,704
Schaaf, G. P., Baltimore, Md. Combined chair and step-ladder.....365,637
Schulthorp, W. J., Columbian Grove, Va. Mail receiver.....365,410
Slaton, C. H., Madisonville, Ky. Car coupling.....365,641
Syme, F. J., New Orleans, La. Rice machine.....365,451
Tomlinson, J. H., and W. H., Rutherford, Tenn. Cotton press.....365,765
Webb, S. J., Minden, La. Car-seat.....365,418
White, J. F., Gallatin, Tenn. Bow spring for eye glasses.....365,496
Wood, A. A., Atlanta, Ga. Paper box machine.....365,666

A. P. THAYER,
Solicitor of U. S. and Foreign
PATENTS,
No. 86 Astor House, New York.

Experience of Over 20 Years.

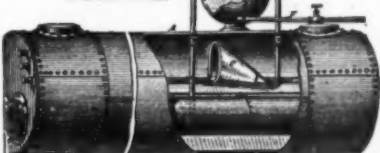


IMPORTANT To Wharf Owners.

THE PATENT PILING PROTECTOR CO., BRUNSWICK, GA., is prepared to protect piling from the Teredo and other Marine Pests in any Harbor in the United States, and will erect its plant, which is inexpensive, in any Harbor where a contract is offered, and prepare piling from the timber near at hand. The process is thoroughly effective, indestructible in salt water, and protection for ten years guaranteed. Is fully protected by letters patent. Has been tested for six years; is better than metal covering; as good and for piling in some respects better than creosoting; costs less than one-half as much as metal covering or creosoting. Circulars fully explaining process will be sent upon application. Correspondence solicited.

Address,
C. P. GOODYEAR, President,
BRUNSWICK, GEORGIA.

"HOW TO KEEP BOILERS CLEAN"
And Prevent SCALING, FOAMING, BURNING. Price \$75.00. Removes Lime Oil, Magnesia, without use of Compounds.



Hotchkiss Mechanical Boiler Cleaner,
Illustrated in an eighty-eight page book, which will be mailed FREE, to any address, by JAS. I. HOTCHKISS, 120 Liberty St., N. Y. Beware of Imitations.

FOR PAMPHLETS descriptive of Roanoke and vicinity, embracing Farming, Timber, Iron, Mangane, Slate and Zinc Lands,
E. H. STEWART,
Address
ROANOKE, VA.

Syracuse Twist Drill Co.

SYRACUSE, N. Y.

Cannon Chucking Reamers.



These Reamers will remove more stock than any other. They only require a hole large enough to carry away the chips, as they will cut to the center, and make a perfect hole.

They keep their size better than any other. As they cut only upon the end, there is no tendency to wear below size.

They will not turn aside for hard or soft spots, nor for holes.

Send for Prices and Catalogue.

For Sale Cheap

MINING MACHINERY:

Crusher, Amalgamator, Washer, Seller, &c., only slightly

used; a bargain. Also Hoisting Engines for Mines.

One 32 x 32 x 9 ft. Planer; 2 Steam Pumps; Sturtevant Blower; Hand Boiler Punch; two 16-Horse Vertical Boilers, and one Horizontal Engine. Also, Engines and Boilers 3, to 45 horse power.

WM. C. CODD,

2010 and 2012 Aliceanna Street,
BALTIMORE, MD.

Notice to Contractors.

The Roanoke Navigation & Water-Power Company, at Weldon, North Carolina, propose to let to contract certain

CLEARING, EARTH-WORK, &c., in the restoration of their property. Plans and specifications of the work to be done can be seen at the office of Harrison Waite, Petersburg, Va. Specifications and forms of contract can be seen at the office of the undersigned, in Warrenton, N. C. Mr. W. E. Daniel, at Weldon, N. C., will go over the line of the work with persons desiring to examine the same. Sealed proposals for the whole or any specific part of the work to be done, will be received addressed to the undersigned until 15th day of July, 1887, at which time the bids will be opened. The right to reject any or all reserved.

S. P. ABBINGTON, Sec. and Treas.

HUGH SISSON & SONS,

210 E. Baltimore St., bet. North & Calvert Sts.,
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MANUFACTURERS OF

Marble Monuments

Tombs, Altars, Counters,
Furniture Slabs, Mantels, Tiles.
Estimates and Drawings Free.

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40, 42 & 44 York Street,
NEAR LIGHT, BALTIMORE.
Repairing of all kinds promptly done.

DECATUR, — ALA —

GREAT ★ INDUCEMENTS

✻ Offered to Manufacturers ✻

★ TO LOCATE IN NORTH ALABAMA, ★

THE **Decatur Land, Improvement & Furnace Co.**

WITH A

PAID-UP CAPITAL OF \$1,000,000.

WITH 5,600 ACRES OF TOWN LANDS AND 50,000 ACRES OF MINERAL LANDS, WITH MAGNIFICENT
MANUFACTURING SITES LOCATED ON THE TENNESSEE RIVER, IS PREPARED TO OFFER

GREAT INDUCEMENTS TO MANUFACTURERS IN THE WAY OF SITES,

AND MONEY AT LOW RATES OF INTEREST, AND THE

BACKING OF A POWERFUL COMPANY.

→ **TWENTY-SIX** ✻ **INDUSTRIES** ←

HAVE LOCATED HERE THE LAST FOUR MONTHS.

In addition to the above Enterprises the United States Rolling Stock Company, the largest Car Works in the world, have just decided to move their Car Works from Urbana, Ohio, to this place.

This is the Largest enterprise ever brought South. Its Cash Capital is over \$1,000,000 and employs between one and two thousand men.

WATER COMMUNICATION WITH THE MISSISSIPPI RIVER ALL THE YEAR ROUND.

Two trunk lines of Railroad, the Louisville & Nashville and the Memphis & Charleston, cross the river at this point.
Two more trunk lines in process of construction.

IMMENSE FORESTS OF HARD WOOD AND PINE AND BOUNDLESS QUANTITIES OF COAL AND IRON IN
EASY REACH. THE WORKINGS OF THE INTERSTATE COMMERCE BILL WILL RENDER
NORTHERN COMPETITION PRACTICALLY OUT OF THE QUESTION.

The Summers in this region are Cool, the Winters Pleasant and the Locality very Healthy.

CORRESPONDENCE WITH MANUFACTURERS SOLICITED.

ADDRESS ALL COMMUNICATIONS TO

WM. E. FOREST, SECRETARY, - - - - - DECATUR, ALA.

GADSDEN, ALA.

❖ *Reasons Why Capitalists and Manufacturers* ❖
SHOULD MAKE GADSDEN THE FIELD OF THEIR OPERATIONS.

GADSDEN is situated in the midst of the RICHEST MINERAL SECTION OF ALABAMA; is on the West bank of the Coosa River. This stream furnishes Cheap Transportation to the Coal Fields and Iron Veins and Beds that are found all along its banks.

The Sand Mountain, Lookout and Coosa Coal Fields are at our very doors. *This Coal Cokes equal to any Coal in the South.* The immense forests that cover the mountain and plains, and all along the Coosa and along the five railroads running to Gadsden, will for ages furnish as **CHEAP CHARCOAL AS CAN BE HAD ANYWHERE ON THE CONTINENT.** Limestone is found all around the city,—so Gadsden has in as great abundance, and at small cost, all descriptions of

➤ **Rich Iron Ores, Fine Coking Coals, best class Charcoal, and Limestone for the quarrying.** ◀

And, as an Iron center, no place in the favored State of Alabama can compare with Gadsden, when we consider our Ore and Fuel supply, our abundant Water, our unequaled Climate, **UNINTERRUPTED HEALTH and FINE TRANSPORTATION FACILITIES.** We have the most **INVITING FIELD** to all seeking locations, either for manufacturing iron in any of its varieties, or for investment in any other industries. Gadsden has to day in successful operation the

LARGEST CHARCOAL FURNACE IN THE STATE,

Has **Four Large Saw Mills**, with annual output of twenty million feet of the finest long-leaf Yellow Pine Lumber, three large Planing Mills, one Foundry and Machine Shop, two Gin and Flouring Mills, large Furniture, Sash and Door Factory, two Metallic Paint Mills, Ice Factory, a splendid system of Water Works, 80 pounds pressure, large steam Brick Works, and in course of construction a 100-ton Coke Furnace, being built by the Gadsden, Alabama, Furnace Co.; has stock subscribed for an additional Charcoal Furnace, has a National Bank, Cotton Compress, large Cotton Warehouse, handling 15,000 bales cotton, and a magnificent agricultural country all around us.

➤ **The Gadsden Land and Improvement Company** ◀
OWNS 3,000 LOTS,

And invites capitalists and manufacturers to come to Gadsden and see its advantages, pledging themselves to donate to any manufactory locating here, and working twenty-five men or more, **GROUND UPON WHICH TO LOCATE PLANT**, accessible to railroad or river. *Our Railroads afford transportation facilities equal to any point in the South.*

The Rome & Decatur gives close connections with the East Tennessee, Virginia & Georgia and Louisville & Nashville systems, the Anniston & Cincinnati with East Tennessee, Virginia & Georgia and Richmond & Danville, also the Alabama Great Southern Railroad; the Tennessee & Coosa Railroad with Alabama Great Southern, also the Tennessee River at Gunterville and the Central Railroad, when built, from Casselton to Decatur, making us on the short line from Kansas City and the West to Atlanta and the South Atlantic Coast.

Lots are Sold on the Most Favorable Terms:

One-third CASH, balance in one and two years.

We have a population of over 4,000, good Schools, and Churches of all denominations; splendid system of Electric Lights, Telephone Communication over the city, also to Rome, Ga. Boats run regularly the year round on the Coosa, carrying U. S. mail and freights from this point to Rome, Ga., a distance by water of 154 miles.

FOR FURTHER PARTICULARS, ADDRESS SECRETARY OF

The Gadsden Land and Improvement Co., ✦ Gadsden, Ala.



BUFFALO HAMMER CO., Buffalo, N. Y., U. S. A., Manufacturers of a full line of Solid Cast Steel Hammers, Sledges, Mauls,



RAILROAD TRACK TOOLS, &c.

Every Hammer or Tool having our name is fully warranted. Catalogues and discounts sent on application.

BAGNALL & LOUD BLOCK CO. BOSTON, MASS.

Largest Manufacturers of Tackle Blocks in the World.

Manufacturers of the Latest Improved Self-Adjusting ROLLER BUSHED and GENUINE METALINE BUSHED and Iron Bushed Rope and Iron Strapped

TACKLE BLOCKS.

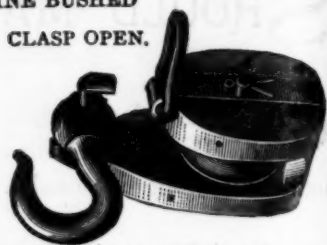
CLASP OPEN.



Improved Self-Adjusting Roller Bushed Iron Sheave.

Send for the Celebrated
STAR BRAND.

Improved Harcourt Patent Block.

Send for Catalogue
No. 5.

Improved Self-Locking Link Snatch Block.

SILVER & DEMING MFG. CO. Salem, Ohio.

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IMPROVED HYDRAULIC RAMS.

The simplicity and effective operation of this machine and its great durability, make it the most useful apparatus yet developed in Hydraulics for elevating water and conveying it to any point desired. This machine can be used to advantage for supplying dwellings, stables, factories, railroad stations, plants, etc., with running water for irrigating lands. When once set in operation it requires no further attention, and will last for years without trouble or expense.

Hydraulic Ram.



Full description and information on application.

Hardware and Gun Trade: Quote our

\$5 Clay Pigeon Trap.

Electrotypes furnished gratis for catalogues. Liberal commissions. 80-page book free. Address

LIGOWSKY CLAY PIGEON CO., Cincinnati, O.

Cleveland Machine Co.

SUPERIOR
OLID
TEEL
HEARS.FORGED
FROM

BAR STEEL

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TEMPERED
IN

OIL.

WE CHALLENGE COMPETITION FOR

Cutting and Wearing Qualities.

THE FINEST. AS GOOD AS THE BEST.

We Expect to Lead, and you cannot afford to lose a chance of keeping posted on the IMPROVEMENTS of the age. Get our prices, and then try a sample order. Your customers will compel you to order again.

Address, with name of paper where you saw this,

The CLEVELAND MACHINE CO., 143 to 161 Leonard St., CLEVELAND, O.

R. R. ROUSE PATENT ELECTRO-PLATED WELL POINT.



1 1/4	1 3/4	2
\$1.50	\$2.50	\$6.00
2 1/4	3	4
\$9.00	\$12.00	\$35.00
		\$75.00

My 1 1/4 Point is 24 1/2 in. long and has 24 1/4 by 1/4 openings.

A showing the openings before the wire gauze is soldered on. B after wire gauze is soldered on. C showing wire gauze and perforated brass soldered on. These 1 1/4 Points (caliber) are Electro-Plated, with Pure Block Tin inside and outside before receiving the coverings, there being no raw iron to corrode or rust or cause an unpleasant taste in the water. The Electric Process by which it is done is patented and exclusively owned and controlled by me for Driven Well Points in the United States. Warranted not to strip loose where soldered. Write for discounts and circular.

R. R. ROUSE, INDIANAPOLIS, IND.

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Presses, Dies,

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Special Machinery

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Sheet Metal Workers.

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For Sale by all Jobbers Handling this Class of Goods.

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Tinners' Machines & Tools,

—FOR WORKING SHEET METALS, &c.—

Fruit Can Dies and Tools.

Cannery Outfits.

Squaring & Circle Shears, Presses, &c.



Superior, Cor. of Randall St., Buffalo, N. Y.

Write for our Catalogue and Price-List. Please mention this paper when writing.

D. SAUNDERS' SONS,

MANUFACTURERS OF THE ORIGINAL

TRADE **I.X.L.** MARK.

Pipe Cutting and Threading Machine.

BEWARE OF IMITATIONS. None genuine without our Trade Mark and name. Also

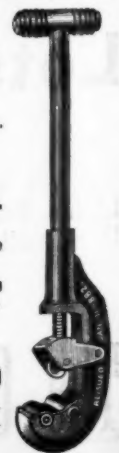
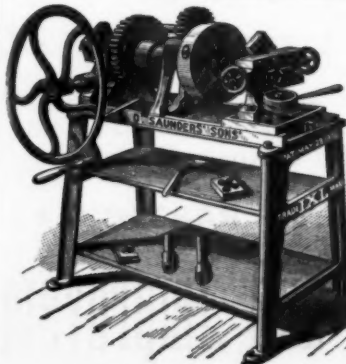
Patent Wheel Pipe Cutter

STEAM AND GAS FITTERS' HAND TOOLS,

Pipe Cutting and Threading Machine

For Pipe Mill Use a Specialty.

Send for Catalogue B. YONKERS N. Y.



COFFER MILLS. Parker's.....dis 45 Wilson's.....dis 40 Logan & Strobridge.....dis 45 Enterprise Mfg. Co.....dis 45	GLUE POTS. Tinned and Enamelled.....dis 35 Family, Howe's "Eureka".....dis 40 Family, L. F. & C.'s "Handy".....dis 40	ICE CREAM FREEZERS. Peerless—3 quart, \$4.50; 4 quart, \$5.50; 6 quart, \$7.50; 8 quart, \$9.00; 10 quart, \$11.00; 12 quart, \$12.50; 14 quart, \$14.00; 16 quart, \$15.50; 18 quart, \$17.00; 20 quart, \$18.50; 22 quart, \$20.00; 24 quart, \$21.50; 26 quart, \$23.00; 28 quart, \$24.50; 30 quart, \$26.00; 32 quart, \$27.50; 34 quart, \$29.00; 36 quart, \$30.50; 38 quart, \$32.00; 40 quart, \$33.50; 42 quart, \$35.00; 44 quart, \$36.50; 46 quart, \$38.00; 48 quart, \$39.50; 50 quart, \$41.00; 52 quart, \$42.50; 54 quart, \$44.00; 56 quart, \$45.50; 58 quart, \$47.00; 60 quart, \$48.50; 62 quart, \$50.00; 64 quart, \$51.50; 66 quart, \$53.00; 68 quart, \$54.50; 70 quart, \$56.00; 72 quart, \$57.50; 74 quart, \$59.00; 76 quart, \$60.50; 78 quart, \$62.00; 80 quart, \$63.50; 82 quart, \$65.00; 84 quart, \$66.50; 86 quart, \$68.00; 88 quart, \$69.50; 90 quart, \$71.00; 92 quart, \$72.50; 94 quart, \$74.00; 96 quart, \$75.50; 98 quart, \$77.00; 100 quart, \$78.50; 102 quart, \$80.00; 104 quart, \$81.50; 106 quart, \$83.00; 108 quart, \$84.50; 110 quart, \$86.00; 112 quart, \$87.50; 114 quart, \$89.00; 116 quart, \$90.50; 118 quart, \$92.00; 120 quart, \$93.50; 122 quart, \$95.00; 124 quart, \$96.50; 126 quart, \$98.00; 128 quart, \$99.50; 130 quart, \$101.00; 132 quart, \$102.50; 134 quart, \$104.00; 136 quart, \$105.50; 138 quart, \$107.00; 140 quart, \$108.50; 142 quart, \$110.00; 144 quart, \$111.50; 146 quart, \$113.00; 148 quart, \$114.50; 150 quart, \$116.00; 152 quart, \$117.50; 154 quart, \$119.00; 156 quart, \$120.50; 158 quart, \$122.00; 160 quart, \$123.50; 162 quart, \$125.00; 164 quart, \$126.50; 166 quart, \$128.00; 168 quart, \$129.50; 170 quart, \$131.00; 172 quart, \$132.50; 174 quart, \$134.00; 176 quart, \$135.50; 178 quart, \$137.00; 180 quart, \$138.50; 182 quart, \$140.00; 184 quart, \$141.50; 186 quart, \$143.00; 188 quart, \$144.50; 190 quart, \$146.00; 192 quart, \$147.50; 194 quart, \$149.00; 196 quart, \$150.50; 198 quart, \$152.00; 200 quart, \$153.50; 202 quart, \$155.00; 204 quart, \$156.50; 206 quart, \$158.00; 208 quart, \$159.50; 210 quart, \$161.00; 212 quart, \$162.50; 214 quart, \$164.00; 216 quart, \$165.50; 218 quart, \$167.00; 220 quart, \$168.50; 222 quart, \$170.00; 224 quart, \$171.50; 226 quart, \$173.00; 228 quart, \$174.50; 230 quart, \$176.00; 232 quart, \$177.50; 234 quart, \$179.00; 236 quart, \$180.50; 238 quart, \$182.00; 240 quart, \$183.50; 242 quart, \$185.00; 244 quart, \$186.50; 246 quart, \$188.00; 248 quart, \$189.50; 250 quart, \$191.00; 252 quart, \$192.50; 254 quart, \$194.00; 256 quart, \$195.50; 258 quart, \$197.00; 260 quart, \$198.50; 262 quart, \$200.00; 264 quart, \$201.50; 266 quart, \$203.00; 268 quart, \$204.50; 270 quart, \$206.00; 272 quart, \$207.50; 274 quart, \$209.00; 276 quart, \$210.50; 278 quart, \$212.00; 280 quart, \$213.50; 282 quart, \$215.00; 284 quart, \$216.50; 286 quart, \$218.00; 288 quart, \$219.50; 290 quart, \$221.00; 292 quart, \$222.50; 294 quart, \$224.00; 296 quart, \$225.50; 298 quart, \$227.00; 300 quart, \$228.50; 302 quart, \$230.00; 304 quart, \$231.50; 306 quart, \$233.00; 308 quart, \$234.50; 310 quart, \$236.00; 312 quart, \$237.50; 314 quart, \$239.00; 316 quart, \$240.50; 318 quart, \$242.00; 320 quart, \$243.50; 322 quart, \$245.00; 324 quart, \$246.50; 326 quart, \$248.00; 328 quart, \$249.50; 330 quart, \$251.00; 332 quart, \$252.50; 334 quart, \$254.00; 336 quart, \$255.50; 338 quart, \$257.00; 340 quart, \$258.50; 342 quart, \$260.00; 344 quart, \$261.50; 346 quart, \$263.00; 348 quart, \$264.50; 350 quart, \$266.00; 352 quart, \$267.50; 354 quart, \$269.00; 356 quart, \$270.50; 358 quart, \$272.00; 360 quart, \$273.50; 362 quart, \$275.00; 364 quart, \$276.50; 366 quart, \$278.00; 368 quart, \$279.50; 370 quart, \$281.00; 372 quart, \$282.50; 374 quart, \$284.00; 376 quart, \$285.50; 378 quart, \$287.00; 380 quart, \$288.50; 382 quart, \$290.00; 384 quart, \$291.50; 386 quart, \$293.00; 388 quart, \$294.50; 390 quart, \$296.00; 392 quart, \$297.50; 394 quart, \$299.00; 396 quart, \$300.50; 398 quart, \$302.00; 400 quart, \$303.50; 402 quart, \$305.00; 404 quart, \$306.50; 406 quart, \$308.00; 408 quart, \$309.50; 410 quart, \$311.00; 412 quart, \$312.50; 414 quart, \$314.00; 416 quart, \$315.50; 418 quart, \$317.00; 420 quart, \$318.50; 422 quart, \$320.00; 424 quart, \$321.50; 426 quart, \$323.00; 428 quart, \$324.50; 430 quart, \$326.00; 432 quart, \$327.50; 434 quart, \$329.00; 436 quart, \$330.50; 438 quart, \$332.00; 440 quart, \$333.50; 442 quart, \$335.00; 444 quart, \$336.50; 446 quart, \$338.00; 448 quart, \$339.50; 450 quart, \$341.00; 452 quart, \$342.50; 454 quart, \$344.00; 456 quart, \$345.50; 458 quart, \$347.00; 460 quart, \$348.50; 462 quart, \$350.00; 464 quart, \$351.50; 466 quart, \$353.00; 468 quart, \$354.50; 470 quart, \$356.00; 472 quart, \$357.50; 474 quart, \$359.00; 476 quart, \$360.50; 478 quart, \$362.00; 480 quart, \$363.50; 482 quart, \$365.00; 484 quart, \$366.50; 486 quart, \$368.00; 488 quart, \$369.50; 490 quart, \$371.00; 492 quart, \$372.50; 494 quart, \$374.00; 496 quart, \$375.50; 498 quart, \$377.00; 500 quart, \$378.50; 502 quart, \$380.00; 504 quart, \$381.50; 506 quart, \$383.00; 508 quart, \$384.50; 510 quart, \$386.00; 512 quart, \$387.50; 514 quart, \$389.00; 516 quart, \$390.50; 518 quart, \$392.00; 520 quart, \$393.50; 522 quart, \$395.00; 524 quart, \$396.50; 526 quart, \$398.00; 528 quart, \$399.50; 530 quart, \$401.00; 532 quart, \$402.50; 534 quart, \$404.00; 536 quart, \$405.50; 538 quart, \$407.00; 540 quart, \$408.50; 542 quart, \$410.00; 544 quart, \$411.50; 546 quart, \$413.00; 548 quart, \$414.50; 550 quart, \$416.00; 552 quart, \$417.50; 554 quart, \$419.00; 556 quart, \$420.50; 558 quart, \$422.00; 560 quart, \$423.50; 562 quart, \$425.00; 564 quart, \$426.50; 566 quart, \$428.00; 568 quart, \$429.50; 570 quart, \$431.00; 572 quart, \$432.50; 574 quart, \$434.00; 576 quart, \$435.50; 578 quart, \$437.00; 580 quart, \$438.50; 582 quart, \$440.00; 584 quart, \$441.50; 586 quart, \$443.00; 588 quart, \$444.50; 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686 quart, \$518.00; 688 quart, \$519.50; 690 quart, \$521.00; 692 quart, \$522.50; 694 quart, \$524.00; 696 quart, \$525.50; 698 quart, \$527.00; 700 quart, \$528.50; 702 quart, \$530.00; 704 quart, \$531.50; 706 quart, \$533.00; 708 quart, \$534.50; 710 quart, \$536.00; 712 quart, \$537.50; 714 quart, \$539.00; 716 quart, \$540.50; 718 quart, \$542.00; 720 quart, \$543.50; 722 quart, \$545.00; 724 quart, \$546.50; 726 quart, \$548.00; 728 quart, \$549.50; 730 quart, \$551.00; 732 quart, \$552.50; 734 quart, \$554.00; 736 quart, \$555.50; 738 quart, \$557.00; 740 quart, \$558.50; 742 quart, \$560.00; 744 quart, \$561.50; 746 quart, \$563.00; 748 quart, \$564.50; 750 quart, \$566.00; 752 quart, \$567.50; 754 quart, \$569.00; 756 quart, \$570.50; 758 quart, \$572.00; 760 quart, \$573.50; 762 quart, \$575.00; 764 quart, \$576.50; 766 quart, \$578.00; 768 quart, \$579.50; 770 quart, \$581.00; 772 quart, \$582.50; 774 quart, \$584.00; 776 quart, \$585.50; 778 quart, \$587.00; 780 quart, \$588.50; 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974 quart, \$734.00; 976 quart, \$735.50; 978 quart, \$737.00; 980 quart, \$738.50; 982 quart, \$740.00; 984 quart, \$741.50; 986 quart, \$743.00; 988 quart, \$744.50; 990 quart, \$746.00; 992 quart, \$747.50; 994 quart, \$749.00; 996 quart, \$750.50; 998 quart, \$752.00; 1000 quart, \$753.50; 1002 quart, \$755.00; 1004 quart, \$756.50; 1006 quart, \$758.00; 1008 quart, \$759.50; 1010 quart, \$761.00; 1012 quart, \$762.50; 1014 quart, \$764.00; 1016 quart, \$765.50; 1018 quart, \$767.00; 1020 quart, \$768.50; 1022 quart, \$770.00; 1024 quart, \$771.50; 1026 quart, \$773.00; 1028 quart, \$774.50; 1030 quart, \$776.00; 1032 quart, \$777.50; 1034 quart, \$779.00; 1036 quart, \$780.50; 1038 quart, \$782.00; 1040 quart, \$783.50; 1042 quart, \$785.00; 1044 quart, \$786.50; 1046 quart, \$788.00; 1048 quart, \$789.50; 1050 quart, \$791.00; 1052 quart, \$792.50; 1054 quart, \$794.00; 1056 quart, \$795.50; 1058 quart, \$797.00; 1060 quart, \$798.50; 1062 quart, \$800.00; 1064 quart, \$801.50; 1066 quart, \$803.00; 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1160 quart, \$873.50; 1162 quart, \$875.00; 1164 quart, \$876.50; 1166 quart, \$878.00; 1168 quart, \$879.50; 1170 quart, \$881.00; 1172 quart, \$882.50; 1174 quart, \$884.00; 1176 quart, \$885.50; 1178 quart, \$887.00; 1180 quart, \$888.50; 1182 quart, \$890.00; 1184 quart, \$891.50; 1186 quart, \$893.00; 1188 quart, \$894.50; 1190 quart, \$896.00; 1192 quart, \$897.50; 1194 quart, \$899.00; 1196 quart, \$900.50; 1198 quart, \$902.00; 1200 quart, \$903.50; 1202 quart, \$905.00; 1204 quart, \$906.50; 1206 quart, \$908.00; 1208 quart, \$909.50; 1210 quart, \$911.00; 1212 quart, \$912.50; 1214 quart, \$914.00; 1216 quart, \$915.50; 1218 quart, \$917.00; 1220 quart, \$918.50; 1222 quart, \$920.00; 1224 quart, \$921.50; 1226 quart, \$923.00; 1228 quart, \$924.50; 1230 quart, \$926.00; 1232 quart, \$927.50; 1234 quart, \$929.00; 1236 quart, \$930.50; 1238 quart, \$932.00; 1240 quart, \$933.50; 1242 quart, \$935.00; 1244 quart, \$936.50; 1246 quart, \$938.00; 1248 quart, \$939.50; 1250 quart, \$941.00; 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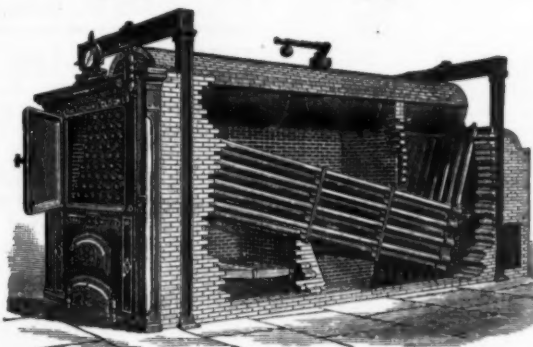
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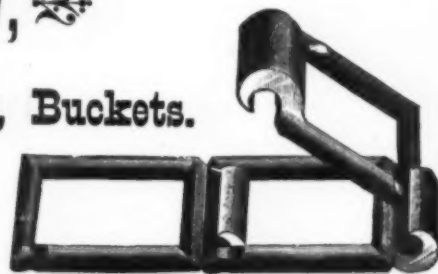
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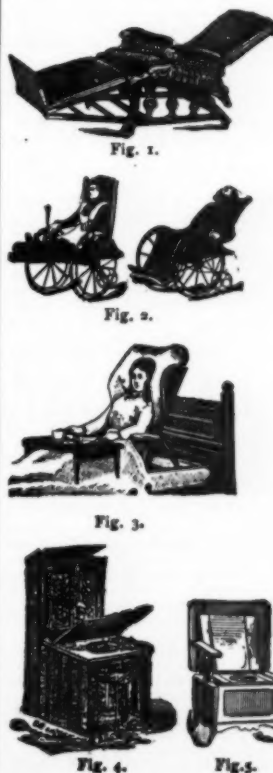
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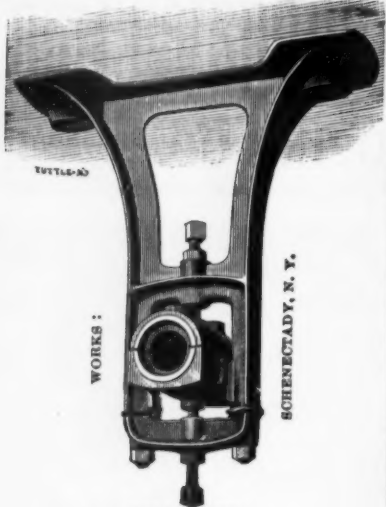
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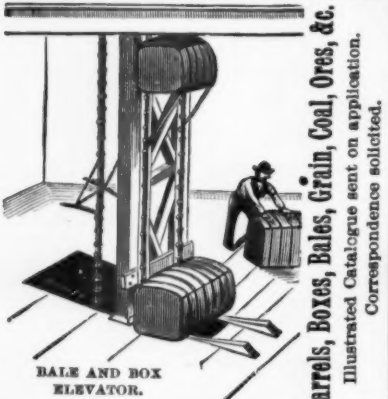
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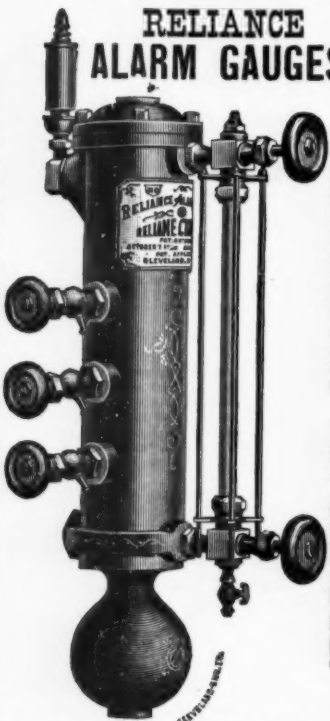
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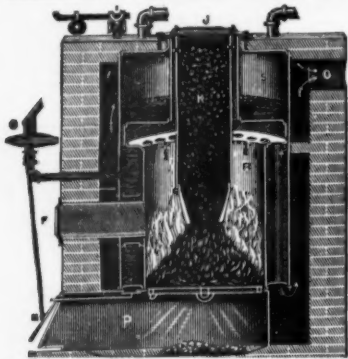
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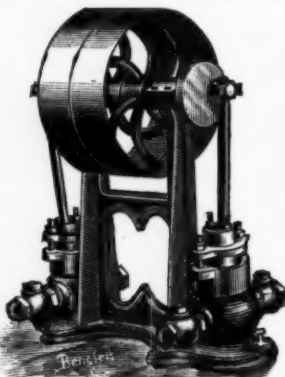
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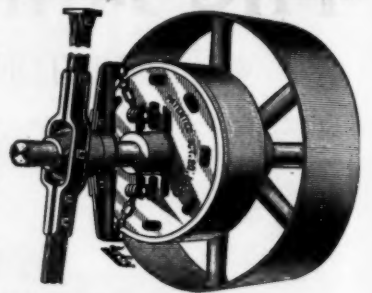
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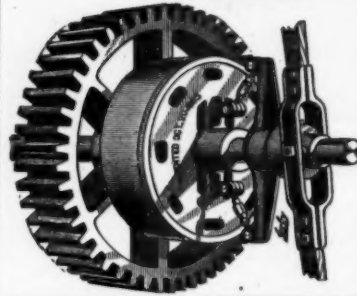
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Subscription Books for the Capital Stock of this Company are now open

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The Company is formed under and by virtue of a Charter granted June 19, 1886, to ANDREW J. ROGERS, JAMES M. OLMSTEAD, HENRY S. WELLES, DANIEL W. CLARK, GEORGE E. SMITH, JOHN E. SAUNDERS, and FREDERICK G. BRUNEL, and their associates, in accordance with the Laws of the State of Georgia, to run for twenty years, with the right of renewal, and authorizing a Capital Stock of \$100,000, in shares of \$50 each, with power to increase the same at any time to any amount not exceeding \$10,000,000, payable in either money, or real or personal property that may be utilized in the business of the Company. The Charter is, by comity of the States, made operative throughout the entire country.

THE PRELIMINARY ORGANIZATION

Has been duly effected by electing the following named

OFFICERS.

ANDREW J. ROGERS, Prest. JAMES M. OLMSTEAD, Vice-Prest. GEO. E. SMITH, Sec. FRED'K G. BRUNEL, Treas.

DIRECTORS.

A. J. ROGERS, Brunswick, Ga., and 227 W. 10th St., New York. FREDERIC G. BRUNEL, Grand Union Hotel, New York.
JAMES M. OLMSTEAD, 85 Devonshire St., Boston, Mass. JOHN E. SAUNDERS, Nashville, Tennessee.
HENRY S. WELLES, 229 Broadway, New York. DANIEL W. CLARK, 11 Winthrop Street, Hartford, Conn.
GEORGE E. SMITH, 32 Broadway, New York. WILLIAM B. BURROUGHS, Brunswick, Ga.

EXECUTIVE COMMITTEE.

ANDREW J. ROGERS, HENRY S. WELLES, FREDERICK G. BRUNEL, WILLIAM B. BURROUGHS.

The said Officers and Directors to hold over until the First Meeting of the Stockholders.

INCREASE OF THE CAPITAL STOCK.

In order to promptly acquire ample areas of Land and Harbor Water frontage, for colonization, wharfing and other purposes, as well as obtaining sufficient funds for carrying out the several objects of the Company, the Directors have duly voted an increase of the Capital Stock from \$100,000 to \$3,000,000, payable in either money or in any real or personal property that may be utilized in the business of the Company, (as provided in the charter,) and have authorized the opening of Subscription Books for said \$3,000,000 of Capital Stock.

EUROPEAN CO-OPERATION.

The President of the Company has perfected arrangements with competent European parties whereby they agree to subscribe, or cause to be subscribed, two-thirds of said \$3,000,000 of Capital Stock, provided the other one-third of said Stock is duly subscribed in America, and to pay in \$200,000 for every \$100,000 thereof that shall have been so subscribed in America and paid into the treasury of the Company.

TRANS-ATLANTIC STEAMSHIP LINE.

The President of the Company has also arranged with competent European ship owners for promptly putting on and maintaining a Trans-Atlantic Steamship Line between the port of Brunswick, Ga., and ports in the United Kingdom; said line to comprise a fleet capable of doing all the trans-Atlantic shipping business of the Company, and to be put on as soon as the Company announces itself ready with freights, etc., for trans-Atlantic shipment.

THE GENERAL ENTERPRISE

Comprises the building up and maintaining an extensive domestic and foreign trade at and through the city and port of Brunswick, Ga., and corresponding ports, and engaging in a general system of Lands Improvement, particularly including the building up, extending and beautifying the city and suburbs, and improving and perfecting the Harbor of Brunswick for maritime commerce, and generally aiding in developing the agricultural, mineral and other natural resources of, and settling the surrounding districts and corresponding sections of the interior, with the view to participating in the general benefits and increase in value of properties accruing from such developments and improvements, and to inaugurate and conduct

BUREAUS OF COLONIZATION AND INDUSTRY

As special departments of the General enterprise for commercially engaging in such systems of Colonization and Co operative Industries as will, from time to time, aid in relieving the Labor Markets of all surplus artisans and other workers, including the worthy, able bodied indigent classes, by drawing them off and settling or aiding them in settling and getting fairly started on alternate lots of the Company's Lands, in suitable rural and growing village districts, or so employing or aiding them to find such suitable employment as will make them reciprocally useful to the Company and ensure their becoming self-sustaining and prosperous constituents of the commonwealth, and finally reimbursing the Company with fair profits for all such assistance, thus materially aiding in freeing society of its worthy, able-bodied, destitute and suffering industrious classes by reclaiming them from all anarchical tendencies, and thence through their own prosperity readjusting them as good, law-abiding and patriotic citizens of the Commonwealth.

THE COMMERCIAL DEPARTMENT.

With the foregoing objects in view, the Company will engage in the following enterprises, taking them up and carrying them forward in such business order as will ensure the prosperity of every department of the General Undertakings, beginning with The Commercial Department proper, it being the only medium through which the more benevolent and humane purposes can be successfully carried into effect with profit to the Company. The Directors are already assured of a large paying business from the commencement of active operations in the following specified enterprises, in which the Company will be constantly turning over its funds and realizing from 5 per cent. upwards of net profits every sixty or ninety days. Viz: A General

TRANS-ATLANTIC and Coastwise SHIPPING BUSINESS

Including storing, wharfing and forwarding at and through said port and corresponding ports, and the sending of goods and other valuables through in bond or by through bills of lading to and from any and all points; the advancing of money on bills of lading and on goods and other property in store; and acting as merchants and general agents, and doing a banking and general commission business. In these departments alone the Company will find constant, active, safe and profitable employment for a considerable amount of its capital, thereby ensuring fair dividends from the start.

OTHER SOURCES OF REVENUE.

By judicious purchases, both in respect to price and locality of lands, as well as the suitability of the climate, and thence properly settling immigrants on alternate

The Stock of the Company will be Receivable at Par in Payment for Lands purchased from the Company.

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lots thereof, carefully reserving every alternate farm or section for sale later on, the Company could reasonably expect to realize from 10 to 25 per cent. net on sales of the first alternate farms or other lots, and thence, in future further realizing from 100 to 500 per cent. and upwards from the ultimate sales of the reserved building lots, farms or sections. This plan carried out on a commensurate scale would of itself, without risk of the capital invested, enrich any well-managed company.

GENERAL LANDS IMPROVEMENT DEPARTMENT.

To buy, own and sell lands and deal in real estate and leaseholds generally, and to engage in a general system of Lands Improvement, particularly including the building up, extending and beautifying the City of Brunswick and Suburban districts, and generally developing and settling the surrounding country; the establishing and settling colonies in the interiors of the various States, and parts of States, wherein immigrant settlers and other industrial classes are needed; laying out and building up villages, towns, and cities; making roads, streets and all necessary and profitable improvements; aiding in the fuller development of the vast agricultural, mineral and other

NATURAL RESOURCES OF THE SOUTH,

Southwest and corresponding sections; the breeding and rearing of horses, mules, cattle and live stock generally, for home and foreign markets; the laying out, improving, stocking and working farms of all kinds; developing water powers for manufacturing, milling and other purposes; opening and working coal, iron and other mines, and marble and stone quarries, with a view to making money by profitably employing the idle, and making homes and livings for the worthy, able-bodied indigent classes, as well as making the several properties productive and generally enhancing the values thereof and making them more saleable. In fact, the company offers

SAFE AND PROFITABLE INVESTMENTS

In every department of the General Enterprise, basing the stability of the entire Capital Stock not only upon the General Business of the Company but upon real estate carefully chosen for its intrinsic worth, its suitability for the purposes of the Company and its improvable qualities and possible continual enhancement in value from direct and surrounding improvements.

BRUNSWICK'S ADVANTAGES in Respect to DISTANCES.

The use of the port of Brunswick for shipping purposes, effects a saving of distances to and from the following named cities as compared with New York, as follows: Louisville, about 125 miles; Denver, 250; Ch-yenne, 260; St. Louis, 275; Kansas City, 300; Chattanooga, 450; Memphis, 475; Nashville, 500; San Francisco, 505; Santa Fe, 579; Tepelobampo, (Mexico), 640; Atlanta, 667; Augusta, 687; Galveston, 700; Austin, 775; Fort Worth, 790; Montgomery, 827; New Orleans, 916; San Diego, 1,160 miles. This statement is of no less importance to emigrants than to shippers of merchandise. It should also be borne in mind that Brunswick is, by ocean route, very much nearer Liverpool than is either New Orleans or Galveston, and has the further advantage of being free from the risks always to be incurred in rounding the Florida Reefs, and the consequent heavy insurance.

THESE SEVERAL ADVANTAGES

In respect to distances, together with the central position and superiority of the harbor, and the widely extending railway connections, must necessarily ensure to the port of Brunswick a very large proportion of the export trade and corresponding import trade of the South, Southwest and Pacific Slope, especially as this port will thenceforward have such direct and regular Trans-Atlantic connections with foreign markets, as well as such improved facilities for discharging and loading ships, as will enable it to successfully compete with other and older ports.

For a fuller statement of the PURPOSES and PLANS of the Company, see the Charter and Prospectuses, Documents Nos. 1, 2 and 3 of the Company's pamphlets, which can be obtained at the Offices of the Agents, or from any of the Officers of the Company.

FORMS OF APPLICATION

For Stock on the part of those who may desire to subscribe to the Capital Stock, but are unable to reach the Agent or Officer in charge of the Subscription Books, will, on application in writing to such Agent or Officer, or to the President of the Company, be forwarded, together with the necessary instructions for securing the number of Shares such Applicant may desire or that may be allotted to him or her.

PROPOSALS FOR TRANSFERRING LANDS

Or other available property in exchange for Stock in the Company will be entertained, and the suitability, quality and value of the property and titles thereto will be duly examined by proper experts in the interest of the Company; but all such proposals must be submitted in writing to an Agent or Officer, or to the President of the Company on or before the 1st day of August next, and must be accompanied with a full description, giving all particulars, including the situation and value of such property.

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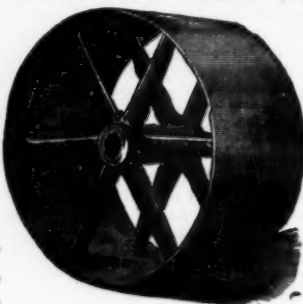
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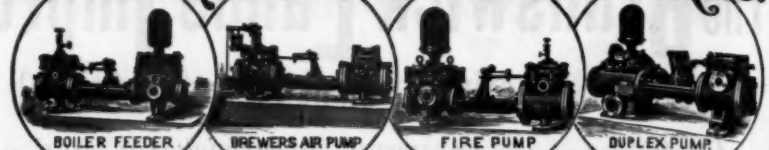
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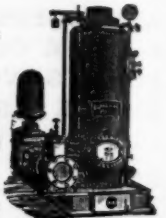
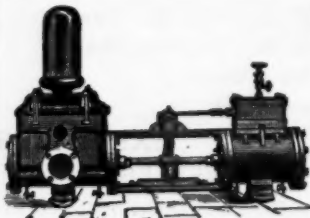
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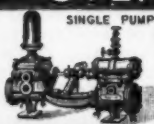
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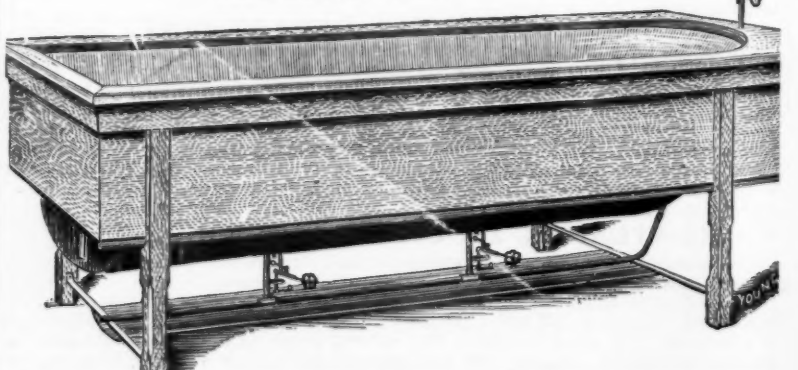
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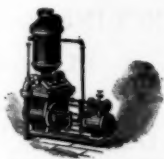
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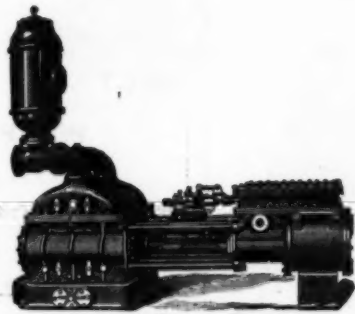
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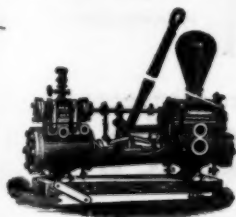
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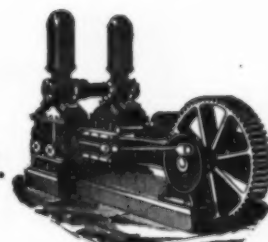
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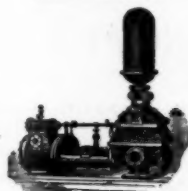
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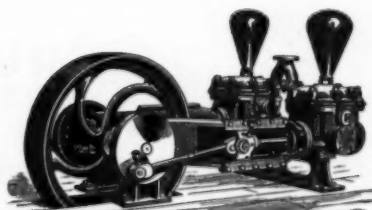
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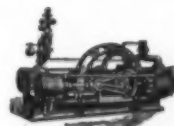
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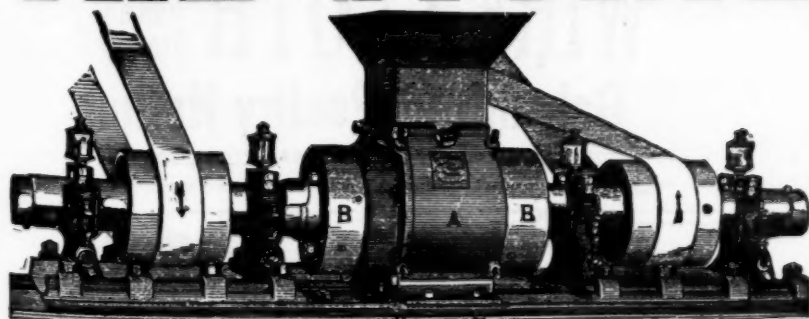
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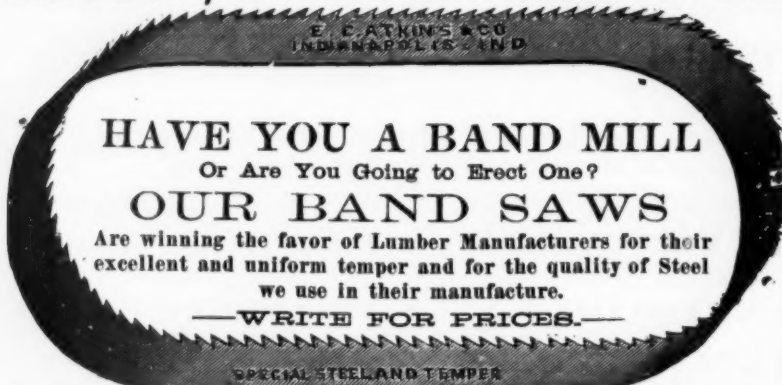
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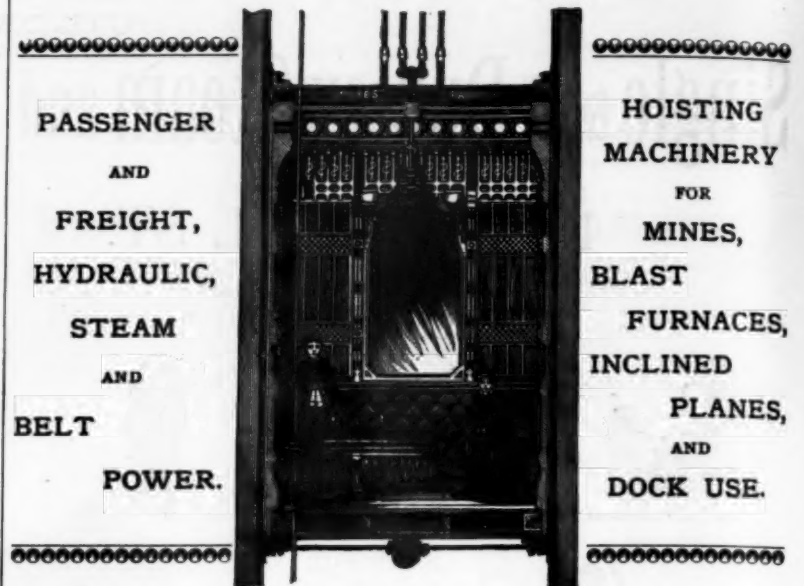
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